

Article

A Study on Orff Music Teaching Practices in Kindergartens Based on Ningbo Nursery Rhymes—A Case Study of Madengdiao

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Abstract: Guided by Orff's music education philosophy, this study took Ningbo nursery rhyme "Madengdiao" as a case, constructed a three-stage teaching model of "disassembly-compilation-creation", applied it to 32 children aged 5–6, and carried out a four-week music activity course. Through the systematic dismantling and re-creation of rhythm, language, and action, children's rhythm perception, action coordination, language imitation, and cultural interest were significantly improved. The results show that the four core indicators were significantly improved, which verified the effectiveness of this model in the transformation of non-material cultural heritage nursery rhymes education and provided a replicable path for the systematic implementation of non-material cultural heritage courses in preschool education.

Keywords: Ningbo nursery rhymes; Madengdiao; Orff teaching method; music creation

1. Research Background

1.1. Policy Context: The Paradigm Transformation of Non-Material Cultural Heritage Education from "Activity" to "Curriculum"

Since the launch of the "non-material cultural heritage Education in Campus" initiative in 2013, China's non-material cultural heritage education policy has undergone a profound paradigm shift from "activity popularization" to "curriculum deepening". In 2021, the general offices of the General Office of the Central Committee of the CPC and the State Council issued the Opinions on Further Strengthening the Protection of Intangible Cultural Heritage (General Office of the Central Committee of the CPC & General Office of the State Council, 2021), which clearly integrated the protection of intangible cultural heritage into the national education system at the central document level for the first time, marking the transition of intangible cultural heritage education from phased activities to normal curriculum construction. This policy shift is particularly evident in the basic education stage: the newly revised Art Curriculum Standards for Compulsory Education in 2022 established "inheriting Chinese excellent traditional culture" as a core competency and emphasized the enhancement of cultural self-confidence through artistic practice (Ministry of Education of the People's Republic of China, 2022). In the field of preschool education, the policy orientation is equally clear. The Guiding Outline of Kindergarten Education (Trial) clearly points out that children should be "guided to actually feel the richness and Excellence of the motherland's culture and stimulate their feelings of loving their hometown and motherland" (Ministry of Education of the People's



Republic of China, 2001). However, at the practical implementation level, the pre-school intangible practice still stays in the fragmented stage of “emphasizing display and neglecting curriculum”, and activities are mostly carried out in the form of live demonstrations and festival performances by inheritors, lacking systematic and student-oriented teaching design (Yu & Wu, 2022). This “visible and intangible” form is difficult to guide children to carry out in-depth sensory experience and cognitive processing, and it also misses the best opportunity for children aged 3–6 to develop their language, music and sociality in a critical sensitive period (Deng, 2023). Therefore, the construction of “curriculum” is not only to teach a skill, but also to embed cultural genes in children’s cognitive structure, break through the current limitations of “display” and explore an intangible education model that conforms to the development law of preschool children, to fill the gap between theory and practice.

1.2. Theoretical Support: Orff Teaching Method and the Theory of the Zone of Proximal Development Provide Support for the Research

Since Orff’s teaching method was introduced to China by Liao Naixiong in 1980s, its localization process has gone through more than forty years. The “introduction period” in the 1980s was mainly about translating and introducing the original works. In the “development period” of 1990s, it began to explore the combination with China folk music; After 2000, the “in-depth period” turned to the systematic integration of educational concepts, textbook construction, musical instrument improvement and teaching practice (Liao, 1986). Its concept of “elemental music” emphasizes the integration and improvisation of music, movement and language with the trinity teaching core of “rhythm-rhythm-improvisation”, which is highly consistent with the characteristics of children’s perception and learning of the world through their bodies. This theory provides direct methodological guidance for transforming the short and dynamic Ningbo nursery rhyme “Madengdiao” into a music game that children can personally participate in and practice. Specifically, based on the concept of “rhythm” and “improvisation” of Orff’s teaching method, the “Madengdiao” is adapted into an operable body language and sound script, so that children can complete the deep learning of Ningbo’s intangible culture through “listening” and “moving”.

Based on Vygotsky’s theory of “zone of proximal development” and “scaffolding” (Vygotsky, 1978), this study established a three-stage advanced teaching model of “disassembly-creation-application” in teaching design, aiming at systematically guiding children aged 5–6 from understanding to creation, and finally realizing the transfer and internalization of their abilities. In the “disassembly” stage, teaching focuses on the existing development level of children and structurally decomposes complex rhythm, movement or language expression tasks. Through demonstration, explanation and interactive demonstration, teachers help children to perceive and master the basic elements, rules or sequences, and build a clear and operable cognitive and skill framework for them. The core of this stage is to provide a safe and supportive learning “scaffold” to help children accumulate necessary materials based on understanding the overall structure. Entering the stage of “creation”, the focus of teaching shifts to the potential development level of children. After mastering the basic elements, teachers encourage and guide children to regroup, adapt and innovate individually or in groups. By setting open-ended tasks, offering heuristic questions and promoting communication and cooperation among peers, teachers gradually withdraw external support, and encourage children to use “disassembled” materials to try to construct their own rhythm patterns, action combinations or language expressions. This stage is the key transition from imitation to creation, and the key point is to cultivate children’s arrangement thinking and initial creative expression ability. The final “application” stage emphasizes the migration and integration of newly acquired abilities in real or simulated situations. Children are guided to apply the skills and creative achievements learned in the first two stages to new game situations, story interpretation or collective performances, so that their learning achievements can gain functional significance and social recognition. At this stage, teachers mainly play the role of situation creator and positive feedback, supporting children to flexibly adjust and consolidate their abilities in complex and dynamic practice, thus truly completing the development leap from “co-construction” to “independent application”.

This “disassembly-creation-application” teaching cycle not only strictly follows the concept that “teaching should go ahead of development” but also makes children’s creative expression based on solid understanding and free exploration through structured ladder design and ultimately promotes deep and sustainable comprehensive ability development.

1.3. Practical Basis: Orff Teaching Method Localization Exploration Process and Non-Material Cultural Heritage Adaptation Mechanism

In recent years, the academic circles have begun to focus on the integration of Orff teaching method and intangible cultural heritage education, and the research paths are increasingly diversified, mainly including the humanistic reconstruction of educational ideas, the nationalization adaptation of teaching materials, the

localization and innovation of musical instrument production, and the situational implementation of teaching practice (Wang, 2012).

At the level of local practice, the exploration of curriculum has begun to appear. On the localization practice path of Orff teaching method in Cantonese dialect musicalization teaching. This paper points out that Orff's teaching method can be effectively integrated into the teaching practice in Guangdong by means of two paths: "the localization teaching strategy of dialect music" and "the musicalization teaching method of local dialect". Among them, the latter is particularly worthy of in-depth discussion: according to the unique phonological characteristics of Cantonese, classical poems such as "Singing in the Mountain Village", "Jiang Xue" and "Bo Qinhuai" are selected as teaching and research contents. Through a series of steps such as reading perception, improvisation, voice superposition, musical instrument accompaniment, etc., the musical teaching of poetry is realized, and on this basis, the body rhythm and musical instrument performance elements of Cantonese opera are integrated, which enriches the teaching (Liu, 2026); Orff's music education concept focuses on "original nature". Infiltrating Orff's music teaching method into Jiangxi folk songs can make students feel their hometown folk songs more intuitively (Chen, 2020). Researchers in Xinjiang tried to integrate Uyghur, Kazak and other minority music resources into Orff teaching, designed teaching examples with ethnic characteristics, and demonstrated the feasibility of integrating local music resources with Orff method (Liang, 2016). These cases with different forms from south to north jointly reveal an important trend: the localization of Orff's teaching method has gone beyond the initial introduction and simple application of ideas and entered a new stage of "deep development" closely related to local cultural genes. They not only verify the feasibility of integration but also contribute to the technical path and methodological support that can be migrated and adapted. Specifically, the rhythmic phonetic rhythm in dialect nursery rhymes can be directly transformed into excellent materials for Orff's rhythmic recitation and rhythmic training; The typical movements and postures attached to folk activities, after refining and simplifying, can naturally develop into a rhythmic paradigm that fits children's physical ability; However, the collective and gamification improvisation links at the core of Orff system have opened up a dynamic practical space for the innovative inheritance and personalized expression of traditional tunes and lyrics in contemporary children. This provides a solid practical reference and enlightening methodology toolbox for the curriculum transformation of similar intangible items represented by Ningbo nursery rhyme "Madengdiao".

1.4. Realistic Demand: The Educational Transformation Gap of Ningbo Nursery Rhymes and the Adaptive Advantages of Madengdiao

Ningbo has also tried to transform regional cultural resources into educational content, forming a group of non-material cultural heritage courses of "Yong Opera, Yong Taste and Yong Yun". However, most of these practices are concentrated in the field of ethnic arts and operatic traditions, while the research on the curriculum of the sound heritage of dialect nursery rhymes is still weak, which urgently needs theoretical support and operational path.

As a typical representative of oral tradition in eastern Zhejiang, Ningbo nursery rhymes have been listed in the intangible cultural heritage list of Ningbo and are an important carrier of regional cultural identity. Among them, "Madengdiao", as a representative tune of folk dance and music in eastern Zhejiang, has distinct artistic characteristics: the rhythm adopts a progressive musical structure with 2/4 beat and distinct strength, which is suitable for children's rhythm; language. It contains onomatopoeic words such as "Qiang Qiang" and "Knock Knock In the action, situational dance elements such as horse racing, circling lights and teasing are retained, which is convenient to transform into gamification teaching. These characteristics make Madengdiao naturally meet the needs of the integrated development of "rhythm, action and language" for children aged 5–6. However, at present, the inheritance of nursery rhymes in Ningbo still stays at the level of "record preservation", and the research on educational transformation is seriously insufficient. This shows that the musical elements of "Madengdiao" are highly detachable and recombined, and it is suitable as the localization carrier of Orff's teaching method.

From the perspective of children's development, the "holistic art" experience advocated by Orff's teaching method is highly compatible with children's learning characteristics. Research shows that the use of Orff music games to intervene in children aged 5–6 can significantly improve their creative thinking and musical expression (Peng et al., 2021); By simplifying traditional tunes into rhythmic slogans and combining them with body rhythms, children can complete the learning closed loop from imitation to creation (Liao, 1986). Therefore, the cross-study of Madengdiao and Orff's teaching method not only responds to the policy orientation of "re-contextualization" but also helps to fill the practical gap of dialect nursery rhymes in the field of preschool music creation.

Based on the comprehensive analysis of the above policy context, theoretical support, practical foundation and local demand, this study takes Ningbo nursery rhyme "Madengdiao" as a specific cultural carrier and teaching

case, and aims to construct and practice a three-stage advanced teaching mode of non-material cultural heritage music for children aged 5–6. This exploration aims to address the practical dilemma of “emphasizing display while neglecting curriculum” in current intangible cultural heritage preschool education, and seeks to fill the gap in systematic, child-centered curriculum transformation of dialect-based sound heritage.

Specifically, the research follows the principle of “education leads development” advocated by the theory of zone of proximal development, and draws on Orff’s educational concept of “elemental music” and his experience of localization. First, the core artistic elements such as distinctive 2/4-beat rhythm, dialect onomatopoeia and situational dance movements contained in “Madengdiao” are systematically dismantled from the perspective of pedagogy, and they are transformed into perceptible and operable rhythm, voice games and rhythmic vocabulary that meet the development level of children’s cognition and movements. Furthermore, a step-by-step “scaffolding” is set up in teaching to guide children from imitating and being familiar with these cultural “parts” to independent reorganization and creation inspired by peer cooperation and teachers, and encourage them to make personalized rhythm arrangement, action creation or lyrics replacement based on traditional elements. Finally, children will be urged to apply the initially formed creative expression to more complex game situations, group performances or story deduction, so that the intangible learning achievements can gain meaning in the practice of “re-contextualization”, thus realizing the closed loop of deep learning from cultural perception, skill mastery to creative inheritance.

This study aims to respond to the following core questions through the construction of this model and classroom demonstration: first, at the methodological level, how to accurately disassemble the music, language and action elements of “Madengdiao” and transform them into serialized Orff-style teaching activities? Secondly, in terms of educational efficiency, can the “disassembly-creation-application” model effectively promote the development of children in key dimensions such as rhythm perception, movement coordination, dialect pronunciation imitation and cultural interest? Thirdly, in the sense of paradigm, can this study provide a reproducible and adaptable theoretical framework and practical path for other regional intangible items, especially dialect and ballad heritage, to be integrated into preschool education curriculum? By answering these questions, this study hopes to contribute to a curriculum scheme with both theoretical rigor and practical operation for the deep integration of non-material cultural heritage in preschool education.

2. Literature Review

2.1. *The Tendency of “Emphasizing Literature Over Music” in Domestic Nursery Rhymes Research and Its Educational Transformation Dilemma*

As an oral art form with sound as its primary medium, nursery rhymes are characterized by the organic integration of musicality and literariness. However, a review of the academic landscape of nursery rhyme research in China reveals a persistent tendency to “prioritize literature over music.” Scholars have predominantly approached nursery rhymes from the perspectives of children’s literature, folklore, and language education, while paying insufficient attention to their musical ontology and their practical application in music education. This tendency not only constrains the theoretical development of nursery rhyme studies but also contributes to challenges in their pedagogical transformation. Some nursery rhymes only focus on content rather than musical form, and as a result, it is difficult to spread them orally among children. To make nursery rhymes truly become children’s oral ballads, we must start from the musical form (Zhou, 2013).

From the academic tradition, domestic nursery rhymes research originated from the ballad movement during the May 4th Movement, which has a strong background of literature and folklore from the beginning. The research path initiated by Zhou Zuoren, Zhong Jingwen and other scholars has established the disciplinary attribution of nursery rhymes as the research object of folk literature and children’s literature. Zhou Shuyun’s research systematically discusses the essential characteristics of children’s songs from the perspective of feature theory, points out that playfulness is the essential characteristic of children’s songs, and analyzes the basic characteristics of children’s songs in aesthetics, psychology, creation and variation (Zhou, 2003). Although this study involves the characteristics of children’s songs, such as pleasure and creativity, its analysis framework is still mainly based on text analysis, and the attention to the musical form of children’s songs is limited.

It is noteworthy that in recent years, the “music turn” in nursery rhymes research has begun to appear. More researchers have begun to pay attention to the application of nursery rhymes in music teaching practice and to explore the integration path of dialect nursery rhymes and school music education. From the perspective of aesthetic education, some scholars have examined the integration of Guangfu nursery rhymes into music teaching for preschool education majors, pointing out that nursery rhymes are “an art form deeply loved by preschool children” and that learning them “can not only effectively improve children’s language ability but also play an

important role in cultivating musical literacy.” This study examines the musical educational value of nursery rhymes under the framework of aesthetic education, which reflects the expansion of the research perspective from “literature standard” to “music standard”. At the same time, the discussion on the relationship between music and language in nursery rhymes has begun to enter the research field of vision. Some scholars have suggested that nursery rhymes, as an artistic genre combining aesthetic education and intellectual education, have important teaching value (Song & Ma, 2023). This re-examination of the ontological characteristics of nursery rhymes provides a new theoretical possibility for breaking through the research inertia of “emphasizing literature over music”.

2.2. *The Localization Process of Orff teaching Method and the Research Progress of Preschool Non-Material Cultural Heritage Education*

Since Orff teaching method was introduced to China by Liao Naixiong in 1980s, its localization process has gone through more than forty years. Wang Lixin (2012) systematically combed this process in his doctoral thesis and divided it into introduction period (1980–1989), development period (1990–2000) and in-depth period (2000–present), pointing out that localization is a dynamic construction process from formal imitation to concept internalization (Wang, 2012). In recent years, academic circles have begun to focus on the integration of Orff’s teaching method and intangible cultural heritage education, and the research paths are increasingly diversified: on the theoretical level, explore the intrinsic affinity between Orff’s “original nature” concept and national cultural genes (Qin & Wu, 2024); On the level of curriculum development, explore the integration of local folk songs and folk art into Orff’s teaching practice, such as the localization attempt of Guizhou folk songs (Yu Danlin, 2024); In the field of preschool education, researchers focus on transforming intangible elements into musical activities that children can perceive, and realizing cultural live transmission through environmental infiltration and game experience (Chen, 2024). Overall, this field has expanded from the application of a single teaching method to an interdisciplinary topic of cultural inheritance and preschool education integration.

2.3. *Theoretical Exploration on the Development of Intangible Curriculum Resources in Kindergartens*

In the research field of kindergarten intangible cultural heritage curriculum resources development, the paper “The Dilemma and Outlet of the Development and Utilization of Kindergarten Intangible Cultural Heritage Curriculum Resources” in *Fujian Education*, which made a systematic analysis of this topic and provided an important bridge between theory and practice (Yu & Wu, 2022).

The study profoundly pointed out that the current practice of intangible cultural heritage education in kindergartens generally has a structural dilemma of “emphasizing form display and neglecting curriculum education”. Specifically, intangible activities are often presented as “one-off” or “embellished” projects such as festival performances and manual exhibitions. Although they are ornamental, they are not deeply integrated into children’s daily learning and life experience, resulting in superficial cultural transmission and limited educational value. This fragmented and active state makes it difficult for intangible resources to be transformed into a sustainable, evaluable and systematic curriculum in line with children’s development sequence.

In view of the above difficulties, the research puts forward the core way out of the transformation from “activity view” to “curriculum view”. This means that the development and utilization of intangible resources must go beyond the isolated thinking of “characteristic activities” and turn to the systematic thinking of curriculum design for overall planning. The specific paths include: First, it is necessary to establish a clear curriculum objective system, and concretize the intangible values such as cultural cognition, aesthetic experience, emotional identification, and skill enlightenment into achievable development goals for children of all ages. Secondly, we should pay attention to the in-depth educational transformation of resources, not only to “move” non-material cultural heritage projects into kindergartens, but also to deconstruct, screen, reorganize and create them in the educational sense according to children’s learning characteristics and interests, and design progressive and diverse thematic activities or project-based learning units. Finally, we should build a scientific evaluation and reflection mechanism, pay attention to children’s experience, exploration and meaning construction in the process, rather than just pursuing the output of results, to ensure the effectiveness and development of the curriculum.

The important contribution of this research is that it advances the positioning of intangible cultural heritage in preschool education from “cultural display materials” to “core curriculum resources” and provides a key theoretical framework and practical guidance for the systematic and normal curriculum transformation of intangible cultural heritage resources. It enlightens educators that the development of non-material cultural heritage curriculum is not only the introduction of content, but also the overall innovation of educational concept, curriculum design and implementation evaluation, which is of fundamental significance for promoting the deep and sustainable inheritance of non-material cultural heritage in early childhood.

3. Research Design

3.1. Research Questions

Which rhythmic, episodic actions and dialect onomatopoeia words in Madengdiao can be extracted and transformed into Orff elements that can be photographed, spoken and moved by children aged 5–6? How to design a third-order activity scheme of “imitation-cooperation-improvisation” based on the above elements, so that the teaching process not only retains the Ningbo flavor of nursery rhymes, but also conforms to Orff’s principle of “elemental music”? What observable changes do children have in rhythm perception, action coordination, language imitation and cultural interest after teaching practice around?

3.2. Research Object

In this study, 32 children aged 5–6 were taught Orff’s Madengdiao for four weeks with qualitative orientation. The activity follows the third-order model of “disassembly-compilation-creation-application” to guide children from imitation and collaboration to improvisation.

3.3. Data Collection

Data were collected through structured observation, high-definition audio-visual recording and teacher interviews. Observation notes were coded across to four dimensions: rhythmic perception, movement coordination, language imitation, and cultural interest. Audio-visual recordings supported micro-level behavioral analysis, while interviews provided complementary insights into teachers’ instructional reflections.

As shown in Table 1, a structured observation coding scheme was developed to assess children’s performance in the Orff-based teaching of Madengdiao.

Table 1. Observation Coding Scheme for Orff Music Teaching of Madengdiao

Code	Dimension	Behavioral Indicators	Observation Criteria	Rating
A	Rhythm perception	Able to accurately follow the beat; clapping/stepping synchronized with musical pulse	(1) Does the clap/step fall on the racket? (2) Is there a lead/lag > 0.5 s?	✓ (synchronization)/ ✗ (Out of sync)
B	Action coordination	Able to perform “move–pause–turn” actions with peers	(1) Are the distances between peers consistent? (2) Are you synchronized when you pause?	✓ (synchronization)/ ✗ (Out of sync)
C	Language imitation	Correct pronunciation of Ningbo dialect words Hui (such as “Knocking” and “Horse” Lights”)	(1) Is the pronunciation accurate? (2) Whether to use complete sentence patterns	✓ (synchronization)/ ✗ (Out of sync)
D	Cultural interest	Displays interest in situational activities (e.g., facial expressions, questioning)	(1) Smile, eye attention (2) Actively asking questions (e.g., “What is Madengdiao?”)	✓ (synchronization)/ ✗ (Out of sync)

3.4. Quality Control and Ethics

This study followed strict ethical and scientific standards. The reliability of the research data and the credibility of the conclusion by means of informed consent, data anonymity, coding consistency test and triangle verification.

4. Implementation of Research Activities

In this study, a third-order teaching model of “disassembly, compilation and application” was constructed, and the Ningbo nursery rhyme “Madengdiao” was carried out Systematic creation and practice of kindergarten. The specific process is as follows:

4.1. “Disassembly” Stage: Extraction and Adaptation of Core Elements

The “educational transformation” of “Madengdiao”: break the original song into two dynamic rhythms of “walking and running” that children can shoot, use onomatopoeia “drumming” as the game point with sudden stress and strength change, and then “stroll along a long queue” Change the simple rhythm of “forward, pause and turn” to keep the dialect “dong” taste, and let the intangible core come alive on the hands, feet and ears of children aged 5–6.

4.2. “Creation” Stage: The Design of the Third-Order Progressive Activity Plan

The activities progress over four weeks: in Week 1, “Ningbo Sounds,” children clap their legs and stamp their feet to establish the “walking–running” rhythm while chanting “dong”; in Week 2, “Dragon Dancers,” they form a long line and embed the rhythm into a coordinated game of “move–pause–turn”; in Weeks 3–4, “Different Dragon Dance Teams,” children improvise at pauses by changing body parts or playing small instruments to create new “dong” sounds, completing the transition from imitation to creation.

4.3. “Application” Stage: Teaching Practice and Participatory Observation

Classroom observation shows that after four weeks, children can maintain the “walking–running” rhythm and automatically adjust the dragon dance formation with peer cues. During the creation phase, more than 80% of the children actively squat, turn around, and raise their hands to become “dragons.” Although their imagination is simple, they show high enthusiasm. After class, they continue to spontaneously imitate the dialectal “dong-dong,” suggesting that the seeds of local culture have begun to take root.

5. Research Results and Analysis

This study presents the research results from the following aspects: an overview of the coding results of Ningbo nursery rhyme “Madengdiao”, the dynamic changes of each dimension with the teaching process, key cases and teacher interviews.

5.1. Overview of the Coding Results of Ningbo Nursery Rhyme “Madengdiao”

The coding results presented in Table 2 show that rhythm perception reached 84%, action coordination reached 71%, language imitation reached 89%, and cultural interest reached 78%, all of which are over 70%. These findings suggest that the model of “disassembly–compilation–creation” can effectively improve children’s rhythm, rhythm, language and cultural identity.

Table 2. Coding results.

Code	Dimension	Observation Criteria	Evaluation Criteria	4-Week Proportion (%)
A	Rhythm perception	Clapping/stepping synchronized with strong beats; deviation ≤ 0.5 s	✓ (synchronization)/ ✗ (Out of sync)	84%
B	Action coordination	“Move–pause–turn” performed in coordination; even spacing	✓ (synchronization)/ ✗ (Out of sync)	71%
C	Language imitation	Correct pronunciation of Ningbo dialect (such as “Knocking” and “Lantern”)	✓ (Correct)/ ✗ (error)	89%
D	Cultural interest	Facial expression and eye contact; active questioning or situational description	✓ (high interest)/ ✗ (low interest)	78%

5.2. The Dimensions Change Dynamically with the Teaching Process

As shown in Table 3, a four-week longitudinal observation showed clear developmental trends. Rhythm changed from sporadic 1/3 to stable majority, the movement synchronization broke 60% in the third and fourth weeks, the accuracy of language imitation soared from 62% to 89%, smiling, staring and asking questions rose synchronously, which confirmed that the model first fixed the rhythm, then reshaped the coordination, strengthened the language, and finally trained the technology into emotional and cultural identity.

Table 3. Table of Dynamic Changes of Dimensions.

Week	Rhythm Perception (A)	Action Coordination (B)	Language Imitation (C)	Cultural Interests (D)
	Synchronization rate	Synchronization rate	Accuracy Rate	High Interest Rate
Week 1	38%	28%	62%	49%
Week 2	55%	45%	74%	62%
Week 3	71%	62%	84%	71%
Week 4	84%	71%	89%	78%

5.3. Key Cases and Teachers Interview

Four cases showed the stability of rhythm, the improvement of action coordination, the deepening of language imitation and culture respectively. Together with teacher interview data, these findings further validate that the proposed model simultaneously promote children’s musical perception, physical cooperation, language expression and cultural identity in different dimensions simultaneously. The case and teacher interview results were presented in Table 4.

Table 4. Case and teacher interview results.

Case No.	Observation Code	Description of Performance	Teacher Feedback
1	A-√ (the Fourth week)	In the “drumming” paragraph, Niu Niu’s error between clapping and music beating is only 0.2 s, and he added a tapping block at the pause to enhance the stress.	“He has been able to perceive the strength of the beat and take the initiative to add personal creativity to the improvisation, which is the goal of Orff’s improvisation.”
2	B-× (the Second week)	Shuai Shuai’s position deviation in the “turn around” action leads to being out of sync with his companions.	“We need to do more ‘standing games’ in spatial perception, and we have joined the warm-up session of ‘finding a partner station’ in the third week.”
3	C-√ (the Third week)	Vivi read “Knocking, Lantern Lights” completely with clear pronunciation, and took the initiative to explain the meaning of onomatopoeia after class.	“The interpretation of the meaning of dialect vocabulary helps children to associate language with situations and enhance the depth of language imitation.”
4	D-√ (the Fourth week)	Xiaoya asked the teacher to sing “Madengdiao” again after the activity, and imitated “March-pause-turn” with gestures at home.	“This spontaneous reappearance after class is the manifestation of cultural interest, which shows that activities have a transfer effect in children’s lives.”

6. Conclusions and Suggestions

6.1. Conclusions

The model of “disassembling, editing and creating, and applying” can successfully transform Ningbo nursery rhyme “Madengdiao” into Orff music activity in kindergarten, and achieve significant improvement in four dimensions. From Table 3, we can see that the synchronization rate has increased from 38% to 84%, which shows that the model is effective in stabilizing the beat. In the aspect of action coordination, the cross-group synchronization rate exceeded 60%, which proved the training value of spatial organization and peer imitation. In terms of language imitation, the correct rate of dialect vocabulary is close to 90%, which reflects the role of boasting demonstration and repeated practice. In terms of cultural interest, the expression and the frequency of questioning increased, indicating that the activities stimulated the local cultural identity.

This study combines Orff’s elemental music with non-material cultural heritage nursery rhymes, provides a practical model of “disassembly-compilation-creation”, and enriches the application cases of Orff’s teaching method in Ningbo nursery rhymes. Provide reproducible and popularized teaching plans and resource packages (teaching materials, teaching plans and evaluation forms) for kindergarten teachers. Provide empirical evidence for the curriculum path of the policy of “not leaving the campus.

6.2. Suggestions

6.2.1. Education Departments Should Strengthen Policy Guidance and Resource Support

To systematically promote the deep integration and high-quality development of non-material cultural heritage education in preschool education, it is suggested to build a top-down and regional linkage support system from three levels: curriculum setting, research support and resource sharing. The specific suggestions are as follows:

Firstly, it should be systematically incorporated into the curriculum system to establish the legal status of intangible aesthetic education. It is suggested that the local education administrative department issue special guidance and formally list “local non-material cultural heritage music” as a necessary part of the local curriculum or kindergarten-based curriculum of preschool education. The document should clarify its core educational goals in promoting children’s aesthetic perception, language development (especially dialect and mother tongue awareness), coordination of actions and local cultural identity, and go beyond the scattered “activities” level to make it a stable module carrying the mission of cultural inheritance in the curriculum system. This can systematically ensure that children can keep in touch with, perceive and infiltrate the rhythm, language and emotion of local culture in their daily education, and cultivate their deep local feelings and cultural self-confidence from an early age.

Secondly, set up a special fund prospectively to stimulate the vitality of curriculum research and development of front-line teachers. It is suggested that local finance or cultural and educational development funds should be allocated to set up a normalized special research fund for curriculum transformation of “non-material cultural heritage kindergarten”. The fund should focus on supporting kindergartens to form a community of practice with universities, non-material cultural heritage protection units or inheritors, and encourage front-line teachers to carry out solid teaching transformation research, lesson development and action research for local nursery rhymes, folk songs, operas and other resources. Through project declaration, achievement selection and excellent curriculum promotion, not only can teachers be provided with substantial resources and professional support, but also a batch of high-quality kindergarten-based courses and teaching cases closely related to regional characteristics, in line with children’s learning laws and with independent intellectual property rights can be born, thus fundamentally enhancing the professionalism and vitality of intangible education.

Finally, innovatively build a resource sharing platform to create a regional coordinated development ecology. Advocate provincial or municipal educational research institutions to take the lead, integrate the strength of cultural centers, intangible cultural heritage protection centers and high-quality kindergartens, and build a digital and open regional intangible cultural heritage education resource library. The platform should not only systematically gather the original resources such as local nursery rhymes audio, folk music scores, traditional game videos and folk story animations, but also develop a series of ready-to-use standardized resource packages, including detailed activity lesson plans, teaching videos, children’s learning evaluation tools and suggestions for family extension activities. Through the mechanism of “resource co-construction, regional sharing and continuous updating”, the threshold of curriculum development in a single kindergarten can be greatly lowered, the rapid radiation and balanced development of high-quality practice mode can be promoted, and a sustainable regional intangible education ecology can be formed.

To sum up, through the three measures of “curriculum calibration-fund-driven-platform support”, we can systematically solve the core pain points of “fragmentation, superficiality and unsustainability” faced by the current non-material cultural heritage preschool education from the three dimensions of policy guarantee, professional support and technical empowerment, and lay an institutionalized, professional and collaborative practical road for the non-material cultural heritage preschool education in live transmission and its innovative development.

6.2.2. Teachers Should Improve Their Cultural Literacy and Curriculum Creativity

With the rapid development of the new generation of artificial intelligence technology and its profound impact on the field of education, strengthening artificial intelligence (AI) education and improving the AI literacy of the whole people have become an important consensus of global education reform (Zeng, Xu, & Wang, 2025). Under the background of this era, the educational goal and teacher’s role of preschool education are also facing reconstruction. To realize the high-quality curriculum transformation of local culture such as non-material cultural heritage music in preschool education, the key lies in building a team of teachers who can adapt to the future educational trend and have strong curriculum innovation and implementation ability. Specifically, teachers’ professional development needs to be systematically promoted from the following three dimensions:

Firstly, promote the deep transformation of teachers’ role from “curriculum executor” to “curriculum creator”. Today, with the increasing convenience of AI-enabled education and knowledge acquisition, the unique value of teachers is increasingly reflected in their irreplaceable cultural understanding, curriculum design and creative interaction ability. Therefore, teachers must go beyond the traditional mode of simply imparting established knowledge and take the initiative to become “researchers” and “educational transformers” of local culture. This requires teachers to deepen their understanding of the connotation of local intangible cultural heritage and children’s learning rules by deeply participating in thematic and participatory teaching and research, and to develop project-based learning (PBL) oriented by real problems. In the process of preparing lessons and teaching, teachers should consciously use digital resources to broaden their cultural horizons and knowledge, and learn to design interdisciplinary, gamification and inquiry-based vivid classes, so as to effectively stimulate and maintain children’s interest and concentration in learning, and at the same time enhance their professionalism and curriculum creativity (Fang, 2023).

Secondly, carry out special training of Orff teaching method focusing on “localization and integration”. Mastering advanced educational concepts and methods is the technical basis for effective curriculum creation. It is suggested that the kindergarten management should institutionalize and normalize the training of Orff’s music teaching method, especially highlight the practical orientation of “localization and integration”. Training should not stop at the teaching of general teaching skills but should focus on how to scientifically decompose and integrate the rhythm and dialect of local nursery rhymes, the action elements of traditional dances and the rules of folk

games into Orff-style rhythm reading, momentum, musical instrument performance and improvisation. Through workshops, demonstration classes and practical exercises, teachers are guided to complete the transformation design from cultural resources to specific teaching activities, so that they can truly master the scaffolding skills of implanting local cultural elements into music classes.

Finally, build a garden-based teaching and research community with the theme of “non-material cultural heritage + music” to form a sustainable curriculum innovation mechanism. The professional growth of teachers and the maturity of characteristic courses are inseparable from the continuous and practical collective teaching and research. It is suggested that the garden should be systematically planned, with “the development of non-material cultural heritage music courses” as the core theme, and a long-term teaching and research mechanism should be constructed. By regularly organizing the case study of “one lesson and more research”, encouraging teachers to carry out in-depth teaching reflection and case writing, and carrying out heterogeneous activities in the same class aimed at stimulating multiple ideas, we can create an open, cooperative and reflective teaching and research culture. In this process, the teachers’ team can constantly learn from each other, optimize teaching strategies, and jointly solve the problems encountered in practice, and finally gradually accumulate and systematize, forming a series of kindergarten-based lessons with clear goals, rich activities and diverse evaluations, and thus aggregate them into a “non-material cultural heritage music curriculum resource library” with distinctive characteristics of the park, thus realizing a virtuous circle between teacher growth and curriculum construction.

In a word, in the face of the challenges and opportunities of the intelligent age, the above measures are aimed at systematically empowering teachers to get strong support from the aspects of ideas, methods and practices, thus becoming the core dynamic force to promote the creative transformation and innovative development of non-material cultural heritage preschool education.

6.2.3. Future Research Can Be Expanded in Breadth and Depth

Based on the exploration and preliminary findings of this study, future research and practice can further deepen and expand in multi-dimensional and interdisciplinary ways, thereby promoting the development of preschool education on intangible cultural heritage in a more systematic, in-depth, and innovative direction.

Firstly, expand the scope of curriculum resources and build a systematic curriculum framework of “non-material cultural heritage + five major fields” for educating people. Future research and practice can break through the limitation of single art form and explore the transformation path of diversified intangible resources such as folk stories, traditional games, handicrafts and festival customs into kindergarten curriculum. The research should focus on how to integrate all kinds of intangible cultural heritage into the five development fields of kindergartens, such as health, language, society, science and art, according to their inherent characteristics and educational value. For example, traditional games can be integrated into action development and sports games in the health field; Wisdom and ethics in folk stories can nourish language and social development; Handicraft can integrate scientific inquiry and artistic creation. The goal is to build an integrated curriculum framework based on children’s all-round development and cultural heritage as the soul and realize the paradigm upgrade of intangible education from “characteristic activities” to “infiltration education environment”.

Secondly, carry out long-term follow-up research to evaluate the deep influence and long-term effect of intangible education. To go beyond the limitation of short-term activities, it is suggested to conduct a longitudinal follow-up study on children who participate in the practice of non-material cultural heritage courses. Through long-term observation, interview, work analysis and scale measurement, this paper systematically investigates the development track of children’s cognition of local culture, the formation of aesthetic preference, the establishment of cultural identity and related skills (such as creativity and cooperation ability). This diachronic research can reveal the persistent and cumulative influence of non-material cultural heritage education on individual growth, provide solid evidence for demonstrating its fundamental value in early education, and provide a basis for iterative optimization of courses.

Thirdly, promote the deep cross-discipline and reveal the comprehensive mechanism of non-material cultural heritage education on children’s development. It is suggested to strengthen the interdisciplinary dialogue and cooperation among music pedagogy, cultural anthropology, child development psychology, sociology and even learning science. Using the mixed research method, we not only investigate the skill acquisition, but also deeply discuss how the practice of non-material cultural heritage learning affects children’s identity construction (such as self-awareness as a “small cultural descendant”), emotional experience (such as love and belonging to the local area) and social growth (such as role and cooperation in collective inheritance). This kind of research goes beyond a single pedagogical perspective and provides a more comprehensive explanation of how intangible cultural heritage education can promote children’s overall development from broader humanistic and social dimensions.

Finally, actively embrace intelligent technology and explore the digital innovation path of intangible education and the traditional modern integration paradigm. Technological empowerment is an important driving force for future educational innovation. On the one hand, we can actively explore the creative application of digital tools such as augmented reality (AR), virtual reality (VR) and artificial intelligence (AI) in non-material cultural heritage teaching (Jiang, 2025). For example, using AR technology to make the scene in nursery rhymes “come to life”, using voice recognition technology to assist children to practice dialect pronunciation, or developing AI rhythm games for personalized training. This can not only greatly improve the interactive, interesting and individualized level of teaching, but also promote the deep integration of traditional content and modern technology in a way familiar to contemporary children. On the other hand, the research can also be extended to more frontier fields, such as observing the influence of non-material cultural heritage music activities on children’s brain activation patterns with the help of neuroscience research methods (such as EEG and near infrared spectroscopy); Using digital humanities technology to analyze and visually present the melody and rhythm of nursery rhymes with big data; Or carry out cross-regional and cross-cultural comparative studies to explore the similarities and differences and universal laws of intangible cultural heritage education models in different cultural contexts (Wang, 2025). These explorations will provide a brand-new scientific perspective and technical means for understanding and optimizing intangible education, thus substantially promoting the innovative development of educational theory and practice.

In a word, the future exploration should make concerted efforts in curriculum breadth, time length, subject depth and technological innovation, so as to build a non-material cultural heritage preschool education research and practice ecology with rich resources, scientific evaluation, clear mechanism and advanced means, so as to truly become a fertile ground for nourishing children’s life growth and continuing Chinese cultural genes.

Author Contributions

L.Z. (Lingling Zhang) is responsible for the conceptualization, methodology construction and field investigation of the study; Y.Q. is responsible for data sorting, first draft writing and visual expression; X.W., as a correspondent, undertakes the whole process supervision, project management and the review and editing of manuscripts; L.Z. (Liang Zhang) is responsible for researching the application, data verification and formal analysis of related software tools. All authors have read and agreed to the published version of the manuscript.

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Institutional Review Board Statement

This study was positioned as educational research focused on the development and empirical evaluation of Orff music teaching practices in kindergartens. Given that all activities were conducted within a standard educational framework and posed no greater risk than routine classroom participation, formal ethical review procedures were deemed unnecessary.

Informed Consent Statement

Informed consent was obtained from all subjects involved in the study.

Data Availability Statement

The data presented in this study are not publicly available due to privacy and ethical restrictions involving child participants but may be made available from the corresponding author upon reasonable request.

Conflicts of Interest

The authors declare no conflict of interest.

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