

Gamification of Music Lessons and Factors Affecting its Use in Private Kindergartens in Beijing

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Abstract

Musical games are an important part of kindergarten music education. This study aims to explore the current use of gamification in kindergarten music education in terms of both the frequency of gamification use and the factors that influence teachers' use of gamification in music teaching and obtain suggestions to enhance teachers' use of gamification in teaching. This is a qualitative study involving the research participants of 28 children and 3 teachers from the middle class (4–5 years old) of the Blue Sky Haiyue Bilingual Kindergarten in Beijing. A total of four music lessons were observed where three were singing and one was rhythmic, with two of the lessons used gamification. Interviews were conducted with the three teachers individually followed by a focus group discussion with them. Data analysis showed that gamification was not frequently used in the teaching of music. Factors that influence the use of gamification in teaching include the level of musical literacy among the teachers, the teachers' attitude towards music, and the extent of attention towards music activities in the kindergarten. Recommendations for enhancing teachers' gamification teaching include improving the teachers' music literacy, encouraging children to participate in music games, and enriching the types of music lessons.

Keywords: Kindergarten, Gamification, Early Childhood, Music Education, Music Teacher

Introduction

Music lessons in kindergartens are an essential carrier for early childhood arts education to tap into musical potential, improve creativity and develop intelligence (Jin, 2019). Music games are a type of music lesson that allows children to have enjoyable experiences in music learning through gamification (Zhu, 2021). The Kindergarten Work Regulations (Ministry of Education of the People's Republic of China, 2016) clearly states that kindergarten education is recommended to be based on games. This indicates that the use of games as a form of daily education in kindergartens has been incorporated into the policies and regulations of early childhood education (Deng, 2018). Such a teaching design in a playful atmosphere allows children to learn quickly and comfortably, thus naturally achieving the intended learning outcomes (Zhang & Xu, 2013).

As kindergarten students are more reliant on the teacher's guidance in their learning, the teacher's music-teaching abilities are critical in kindergarten music lessons. Past studies have identified some related issues. Firstly, teachers' ability to provide live music accompaniment to children's songs is limited (Deng, 2022). Teachers playing the accompaniment of the songs can be more flexible than using a music player, but the incompetency in playing usually resorted to the use of playback music (Tang, 2020). Secondly, teachers emphasise skills over emotions in music teaching (Luo, 2021). A high percentage of practice focusing on the areas of music knowledge and skills caused a lack of interest in music learning among young children (Huang, 2022). Therefore, skills to mobilise young children's enthusiasm are essential for teachers to enhance their emotional experience of music in music learning. Based on the popularity of gamified teaching in Chinese kindergarten education and the problems in teaching music as found in past studies, this paper further identifies existing issues and any possible solutions towards the improvement of gamified teaching of music to young children.

Literature Review

1. Benefits and Shortcomings of Gamified Music Teaching

Merkow (2012) observed that young children learn through play, observation, imitation and participation, particularly in music. In parallel, play-based, child-centred early childhood music programs can develop children's innate musical abilities (Niland, 2009). As teachers step outside the confines of the traditional methods of kindergarten music education, the children's instinct is fully liberated, allowing them to feel joy through untrammelled body rhythms (Jin, 2019). More importantly, play and music help children develop emotional and social skills, eliminate negative complexities around them and gain more confidence (Kryeziu, 2021).

At present, there are still areas for improvement in gamified music education in kindergarten. Some teachers included games that were not relevant to the educational purpose of the music lesson but only as a form of play (Zhu, 2021). For example, children were involved in play only for the purpose of having fun, neglecting their learning and hindering their development (Luo, 2021). Furthermore, the use of inappropriate games for the age of the children prevented the integration of the play environment and music (Cheng, 2012).

2. Implementation of Music Gamification Education in Kindergartens

Children can have difficulty understanding relatively abstract literature including music due to their young age and still limited life experience (Zhou, 2021). Therefore, integrating teaching content with games can help children learn music better. Gamification should start with the enrichment of teaching content to increase the interest in music among children (Zhou, 2018) with the appropriateness of content being improved progressively (Tian, 2020). For example, the song "The Tortoise and the Hare" contains a storyline, and a role-playing game can be used to accompany the song and deepen the children's understanding of the content.

Music teaching in kindergartens should be carried out in suitable environments by considering the actual situation, avoiding external conditions that can affect implementation and ensuring the effectiveness of music gamification teaching and children's learning (Tian, 2020). Besides, the kindergarten premises and teaching aids such as accompanying instruments should be utilised appropriately to increase children's experience of participating in music games (Wang, 2020). For example, many instruments are mentioned in the song "Little Conductor", and thus teachers can provide children with different instruments to accompany the song,

rearrange the lyrics to suit the instruments that are available or arrange a live concert performance.

3. Teacher's Teaching Ability and Approaches

Kim and Kemple (2011) identified four aspects related to music teachers' professional competence that can influence their attitudes in teaching: personal music experience, live music teaching experience, teacher training courses, and teachers' self-efficacy in implementing music activities in the classroom. Teachers who have inadequate musical and practical skills to teach music rely excessively on multimedia for teaching (Deng, 2022), and this further neglects the improvement of their teaching skills. The lack of musical expertise inevitably leads to poor lesson preparation and ineffective implementation of music teaching (Alfredo, Jerry, Morgan & Beatriz, 2022). The low competency, in turn, makes teachers less confident in their teaching and consequently reduces their interest in teaching music (Barrett, Flynn, Brown & Welch, 2019) and motivation to improve their skills.

There is a lack of consideration among teachers for individual differences among children (Liu, 2021). A single mode of teaching that makes music lessons boring and mechanical singing lessons should be avoided (Tang, 2020). When conducting music games, teachers need to be sensitive to children's emotions and behaviours and flexible in adapting their teaching to children's different interests and needs (Wan, 2019; Xu, 2019). Children's age and receptiveness to musical games should be considered a priority (Tian, 2020; Zhou, 2021). Appreciation through praise and encouragement for children with weaker musical abilities can be more helpful than condescendingly criticising them (Tang, 2020). Moreover, the importance of children's initiative and independent exploration should be emphasised in the classroom (Zhou, 2021), and the teacher's identity as an organiser, guide and participant (Tian, 2020) will enable children to truly engage in music learning.

Early childhood music activities are beneficial to children's physical and mental development, and gamification can be an appropriate and preferred learning method for young children. Teachers' pedagogical skills and the use of gamification can directly influence children's experience of music learning. Existing research has focused on teachers' lack of teaching skills and strategies to improve them, but there is a gap in knowledge on the factors that influence teachers' use of gamification in teaching music to young children.

Objectives of the Study

This study was conducted through the case study of Blue Sky Haiyue Bilingual Kindergarten in Beijing. The research participants were 3 music teachers and 28 children aged 4 to 5 years old in the middle class. The research questions of this study are:

- 1) How is the use of gamification in music activities in the classrooms of the kindergarten?
- 2) What are the factors that influence the teachers' use of gamification in teaching music?
- 3) How could the use of gamification be enhanced in music teaching?

Apart from developing initial musical literacy, music games can help to nurture the children's willingness to learn music, allowing them to absorb music knowledge and skills actively, autonomously and voluntarily. Hence, this study aims to provide an understanding of the current implementation of kindergarten music activities and teachers' use of gamification as well as identifies recommendations to enhance gamification in music education.

Methods

This study was conducted in Beijing Blue Sky Haiyue Bilingual Kindergarten, China. It is a private kindergarten with two junior classes, one middle class and two senior classes, each with one music lesson per week. This is a single case study employing qualitative approach. The participants of this study were 28 children in the middle class and 3 music teachers. Data collection involved observations of four 20-minute lessons in four weeks from June 6, 2022 to July 1, 2022; one-to-one interviews with the three music teachers; and a focus group discussion with the three teachers.

The procedures of data collection were: Firstly, the schedule of the weekly activities in each subject in the classroom under study was identified. Next, classroom observations were conducted focusing on teaching processes, details of music activities, frequency of gamified teaching sessions, teacher-student interactions and frequency of children distracted during each lesson. Distractions in lesson observations refer to situations where children did not respond to teachers' instructions and questions, or where children behave in ways that are not related to the teaching lesson, such as playing on their own or with other student. Classroom observation sheets were used to record observations in real time. Thirdly, face-to-face individual interviews were conducted with the three music teachers to obtain their views on music education, their competency level, their approach to using gamification and the problems they encountered in using gamification. Each teacher was interviewed at the end of their music lesson with an average interview time of 40 minutes per teacher. The semi-structured interview questions are:

1. How do you provide music education activities for children? Why?
2. Do you regularly learn about approaches to teaching music?
3. Where do you choose the main sources of content for the gamification of music activities?
4. How do you think preparing for music activities differs from preparing for activities in other subjects?
5. Do you prefer gamification of music activities for young children or a general lesson format?
6. How do you think about the need to combine games with the content of musical activities?
7. How do you adjust the difficulty of the gamified content of music teaching according to the learning level of the children in your class?
8. How do you think the kindergarten values the gamification of music education??
9. Have you attended any training on gamification?
10. How effective do you think gamification of music teaching is?

As a final step, a 30-minute focus group discussion was held with the three teachers on the recommendations for using gamification effectively in music teaching and learning, taking into account the problems identified by the teachers and the current situation of the kindergarten.

Results**Teaching Content**

A total of four music lessons were conducted in the middle class of Beijing Blue Sky Haiyue Bilingual Kindergarten in four weeks with each lesson lasting approximately 20 minutes. The number of lessons and the use of gamification by the three teachers were as follows: Teacher A had two lessons ("Summer Thunderstorm" and "Little Brother") and did not use

gamification in any of them; Teacher B had one lesson and used gamification once; and Teacher C had one lesson and used gamification once (

Table 1).

Table 1

Music lesson observations in the middle class of Beijing Blue Sky Haiyue Bilingual Kindergarten

Title of the song	“Summer Thunderstorm” [夏天的雷雨]	“Little Brother, Get Up Early” [小弟弟, 早早起]	“Little Snowflake” [小雪花]	Snowflake”	“Baby Elephant Bathing” [小象洗澡]
Type of music lesson	Singing	Singing	Singing		Rhythmic Exercise
Teacher	Teacher A	Teacher A	Teacher B		Teacher C
Number of children	28	27	28		28
Teaching with gamification	No	No	Yes		Yes
Purpose of using gamified teaching	NA	NA	Introducing the theme of the song		Learning the rhythm of the song
Sources of games used	NA	NA	Reference from the other teachers		Customised by the teacher
Number of teacher-student interactions	9	7	8		20
Number of student distractions	6	6	4		1

1. “Summer Thunderstorm”

夏天的雷雨

马革顺 作曲
盛瑞德 作词
苍强曲谱 软件

1 = C $\frac{2}{4}$
♩ = 72

5 5 5 | 6 6 5 | 1 1 6 3 | 5 - | 1 1 1 |
天 空 中 一 闪 闪, 什 么 光 发 亮? 天 空 中
一 闪 闪 一 闪 闪, 天 上 闪 电 亮, 轰 隆 隆

5 5 3 | 5 5 4 3 | 2 - | 5 5 5 | 6 6 5 |
轰 隆 隆, 什 么 声 音 响? 天 空 中 哗 啦 啦,
轰 隆 隆, 打 雷 声 音 响. 哗 啦 啦 哗 啦 啦,

1 1 6 3 | 5 - | 2 3 5 | 5 6 5 6 | 3 2 | 1 - ||
什 么 落 下 来? 小 朋 友 请 你 快 快 想 一 想.
大 雨 落 下 来, 告 诉 你 这 是 夏 天 的 雷 雨.

Figure 1: The score of the song “Summer Thunderstorm” [夏天的雷雨]. (Adapted from www.cangqiang.com.cn)

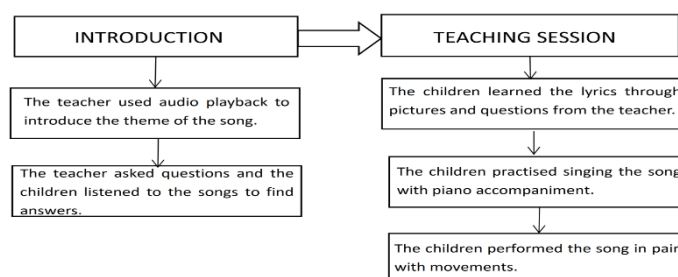


Figure 2: The flow of the events for the music lesson on the song “Summer Thunderstorm” [夏天的雷雨].

Teacher A taught the song “Summer Thunderstorm” [夏天的雷雨] (Figure 1) to the 28 children of the middle class in a 20-minute session (

Figure 2). Teacher A used playback sounds of thunder, lightning, and rain as an introduction to provide the context of the song to the children. Then, the teacher used the question “Listen carefully to the song. What are the lyrics about?” to guide the children to listen and participate in the music learning.

In the teaching session, the teacher asked several questions to help the children understand the song such as “Have you ever seen lightning in your life? What does lightning look like when it appears?”. The teacher then showed the pictures of lightning. The children recited the lyrics a few times by repeating them after the teacher. Afterwards, the children sang the song three times with the teacher providing music accompaniment on the piano. Most of the children did not sing the melody of the song but read the lyrics with the piano playing. At this point, children did remember and understand the lyrics, but they could hardly sing along as they were unfamiliar with the melody. The teacher then guided the children to create movements in pairs based on the lyrics and encouraged them to demonstrate and comment on each other movements before ending the lesson.

There were six distractions throughout the music lesson mainly in the second half of the lesson. This could be due to the diminishing interest of the students after a few times repeating the songs in a monotonous way. In general, this lesson did not use gamification and by the end of the lesson, the children remembered the lyrics but were not familiar with the melody of the song. In terms of teacher-student interactions, the teacher asked nine questions, all of which were answered collectively by the children.

2. “Little Brother, Get Up Early”

·小弟弟早早起

1 = bE $\frac{2}{4}$
活泼地

木青词
汪玲曲

(5 . 5 | 5 4 | 3 . 3 | 3 1 | 2 0 | 2 7 | 1 -) | 3 3 | 3 1 |

1. 小弟弟
2. 牙齿刷得

5 4 | 3 | 2 4 | 3 1 | 2 - | 3 3 | 3 1 | 5 4 | 3 |

早早起, 早呀早早起, 叠好被子穿好衣,
真干净, 真呀真干净, 手儿脸儿自己洗,

2 . 3 | 2 7 | 1 - | 6 6 | 6 4 | 5 5 | 5 ||

穿呀穿好衣。
自 亚克西, 亚克西,
亚克西, 亚克西,

2 . 2 | 2 4 | 3 2 | 1 - | 结束句
亚克西, 亚克西! D.C. 亚克西!

Figure 3: The score of the song “Little Brother, Get Up Early” [小弟弟早早起]. (Adapted from www.jianpu.cn)

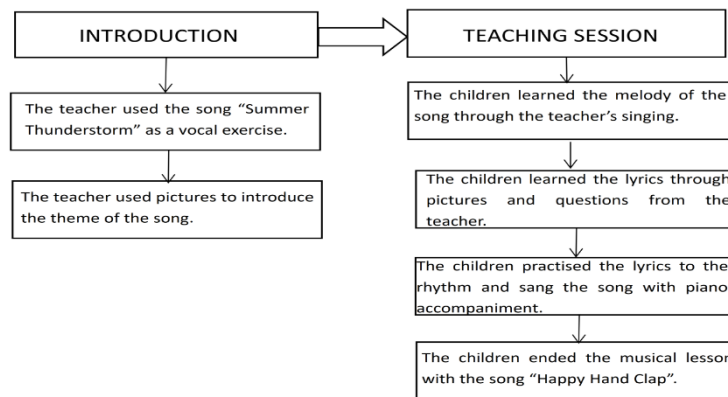
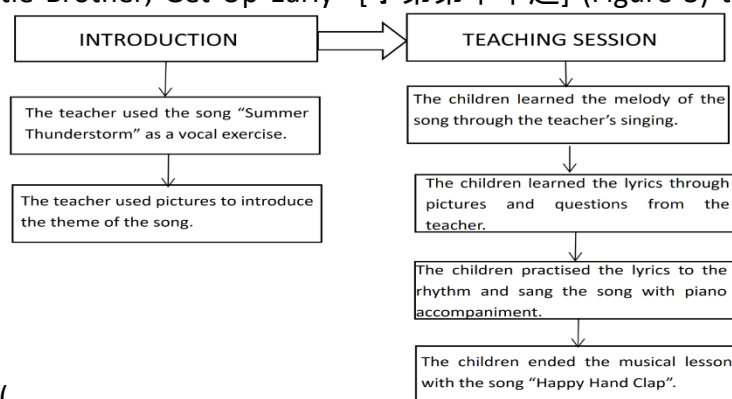


Figure 4: The flow of events for the music lesson of the song “Little Brother, Get Up Early” [小弟弟早早起].

Teacher A taught the song “Little Brother, Get Up Early” [小弟弟早早起] (Figure 3) to 27



children in a 20-minute session (

Figure 4). In this session, Teacher A utilised the song “Summer Thunderstorm” taught in the previous week as an introduction and vocal exercises to establish the mood of the music lesson quickly. After showing pictures of children getting up from the bed and asking them to describe them, the teacher moved on to the theme of the new song “Little Brother, Get Up Early”.

In the teaching session, Teacher A sang the song first so that the children became familiar with the melody, followed by questions and illustrations to help them remember the lyrics. The pictures in this session are the same as those in the introduction. As the children became familiar with the lyrics by describing the pictures, they easily got bored after reciting them repeatedly. After the students memorised the lyrics, the teacher led them to repeat the lyrics twice in the rhythm of the song and then practised singing the song with the piano accompaniment. To learn the rhythm of the songs, the teacher led the children to practise by clapping their hands repeatedly, which this seemingly monotonous way caused some children to feel bored. At the end of the song, the teacher summarized the meaning of the song, ending the lesson with the song “Happy Hands Clap” [快乐拍手歌] which the children have learnt previously.

There were six distractions throughout the lesson, mostly during repetitive and monotonous moments such as when practising rhythms. In helping the children remember the lyrics, the teacher used pictures as a visual guide. Gamification was not employed in the lesson, but the children showed interest in learning. Meanwhile, the children interacted actively with the teacher, with all seven questions from the teacher being answered collectively by the children.

3. "Little Snowflake"

小雪花
(大众乐谱网制谱) 张宁词典

中速 天真地

是谁从天空中飘下, 是谁从天空中飘下?
是谁敲着窗户沙沙沙, 是谁敲着窗户
沙沙沙? 是我, 是我, 是我小雪花,
是我小雪花, 是我小雪花!

Figure 5: The score of the song "Little Snowflake" [小雪花]. (Adapted from www.qupu123.com)

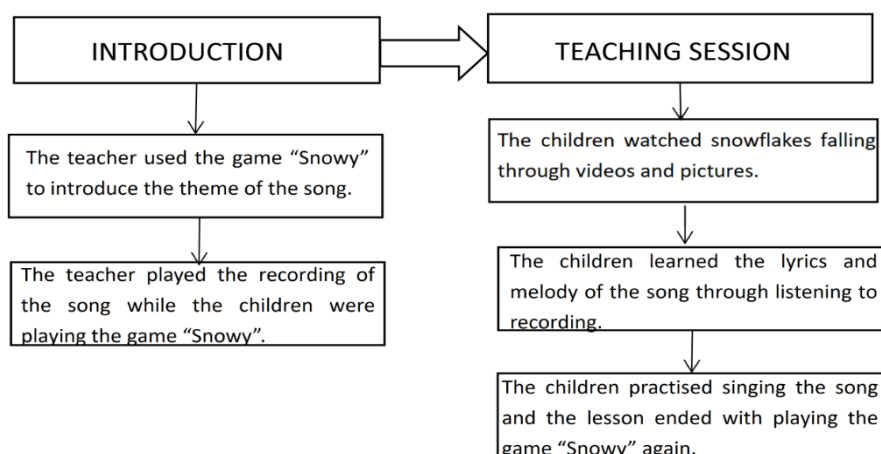


Figure 6: The flow of events for the music lesson of the song "Little Snowflake" [小雪花].

Teacher B taught the song "Little Snowflake" [小雪花] (

Figure 5) to 28 children in a 22-minute session (Figure 6). During the introductory session, the teacher used a language game called "Snowy". The teacher divided the children into two groups: one to play the role of the North Wind and the other the role of Snowflakes. The game started with the children playing the role of North Wind forming a small circle with the teacher standing inside the circle, and the children playing the role of Snowflakes forming a large circle around the North Wind group. When the teacher said, "It's blowing a little wind", the North Wind group imitated the sound of blowing wind in a low voice, and the snowflake group walked around the circle. When the teacher said, "It's blowing a strong wind", the North Wind group imitated the sound of the wind loudly, and the snowflake group ran around the circle. When the teacher said, "The wind has stopped and the sun has come out", the North Wind group covered their mouth and kept quiet, and the Snowflakes group squatted. After the children were familiar with the game, the teacher added piano accompaniment so that there was a natural transition from the game to the singing session.

When teaching the song, the teacher used multimedia to show pictures and videos to visually show the children how snowflakes fall. This part of the song teaching was designed to be progressive, starting with the children observing snowflakes falling to get them interested in learning, followed by the teacher's demonstration of the song "Little Snowflake", and then using pictures to enable them to remember the lyrics and the rhythm of the song. The teacher played the music of "Little Snowflake" through recording and then sang the song to deepen their impressions of the melody. Subsequently, the teacher guided the children to sing correctly and improve their mastery of the song by singing it in pairs. The lesson ended with the game of "Snowy" again. The whole music lesson ended with fun, keeping the children energised so that they can remember what they had learned.

There were four distractions throughout the lesson, mainly during the learning of lyrics and listening to the song through recording. At the beginning and towards the end of the lesson, the teacher used games closely related to the content of the song to motivate the children and deepen their memory of the song. The interaction between the teacher and the students was effective with the teacher asking eight questions and the children answered all of them collectively.

4. "Baby Elephant Bathing"

小象洗澡 "Baby Elephants Bath"

X X X X X

小象出门玩。

(Xiao xiang chu men wan)

Baby elephants go out to play.

X X X X X O X X O X X X X X O X X O

打招呼，你好，你好。打招呼，你好，你好。

(Da zhao hu, ni hao, ni hao.)

Say hello, hello, hello. Say hello, hello, hello.

X X X X X X O X X X X X X O

看见一个大池塘，我们一起玩水吧。

(Kan jian yi ge da chi tang, Wo men yi qi wan shui ba.)

They see a big pond, Let's play in the water.

X X X X X000 X X X X X000

伸出鼻子，吸。 扬起鼻子，吐。

(Shen chu bi zi, xi. Yang qi bi zi, tu.)

Stick out elephant trunk and suck. Raise the elephant trunk and spit.

X X X X X X X X X X X X X X X X O

伸出鼻子转个圈，哎呀摔倒了，赶快爬起来。

(Shen chu bi zi zhuan ge quan, Ai ya shuai dao le, gan kuai pa qi lai.)

Stick out your trunk and turn around, Oops, fall down, get up quickly.

X X X X X X X X X X X X O X X X X X X O

好脏呀，好脏呀，想办法。好脏呀，好脏呀，想办法。

(Hao zang ya, hao zang ya, xiang ban fa.)

It's dirty, it's dirty. Do something. It's dirty, it's dirty. Do something.

X X X X X X X X X O

洗一洗，洗一洗，干净了。

(Xi yi xi, xi yi xi, gan jing le.)

Wash it, wash it, it is clean.

Figure 7: The rhythm and lyrics of “Baby Elephants Bath” [小象洗澡].

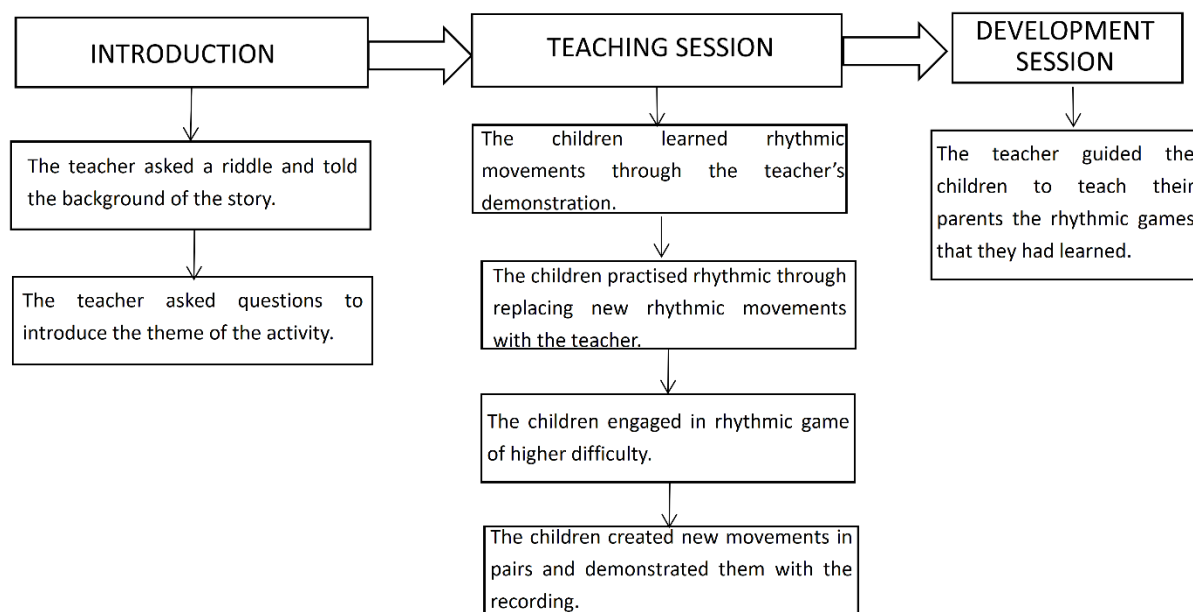


Figure 8: The flow of events for the music lesson of “Baby Elephant Bathing” [小象洗澡].

Teacher C taught the musical rhythms of “Baby Elephant Bathing” [小象洗澡] (Figure 7) to 28 children in a 23-minute session (Figure 8). In the introductory session, the teacher used a riddle to introduce the main character “Little Elephant”, created a story and introduced the lesson by asking questions. The riddle-guessing lesson encouraged the children to participate spontaneously and actively, which created a fun experience and promoted learning.

In the teaching session, the teacher first played the recording of the German song “Schokoweihnachtsmann” (Chocolate Santa Claus) and created rhyming words according to the rhythm of the song. The teacher then demonstrated the rhythm movements and formed circular “binoculars” using hands, and asked the children, “What shape are the binoculars that the little elephant used when he found the pond?”. After that, the teacher guided the children to repeat the rhythms using different “binoculars” shapes. Secondly, in the game, the teacher guided the students to change the game from sitting to standing, and from playing alone to playing in groups of two, which brought a different game experience to the children and made the game fresh and attractive. The teacher guided each group of children to complete the game with a different movement and then inspired them to invite the teacher who was observing the lesson to participate in the game as the final part of the lesson. By allowing each group to design their moves, the game became more interesting, and the children were more motivated to participate. In the development session, the teacher encouraged the children to teach the game to their parents to play it with them.

There was only one distraction during the whole lesson, which occurred during the group game when the children were too excited and did not follow the teacher’s instructions. Most of the activities were accompanied by games, except for the introductory part of the story. For the rhyming lesson, the teacher did not directly teach the children rhythms and songs but allowed them to learn subconsciously through various games. The games were layered so that the whole programme was organised in a fluid and fun way, and there was a developmental component so that children could share what they had learnt at kindergarten with their families at home. In terms of teacher-student interaction, the children played games with the

six teachers who were observing the programme. The teacher asked 20 questions, which were all answered collectively by the children, showing a highly effective interaction.

Current Issues of Music Teaching and Learning

Through observations, of the above four music activities in the middle class of Beijing Blue Sky Haiyue Bilingual Kindergarten, three issues were found: 1) low frequency of musical activities in the curriculum, 2) lack of variety in music activities, and 3) lack of gamification in music teaching.

1. Low Frequency of Musical Lessons in the Curriculum

From classroom observations, the music lesson in the middle class was only held once per week on Wednesday mornings, and the average time for a single lesson was approximately 20 minutes. In contrast, the weekly class schedule consists of four picture book activities; three scientific intellectual; three painting activities; two sandbox activities; daily sports activities and five weekly interest corner activities. Music is not given much attention in school.

2. Lack of Variety in Musical Lessons

Music activities in the middle class mostly comprised singing. Each week, the teacher taught one song to the children, and the teaching activities frequently took the following form: the teacher introduces the lesson, teaches the lyrics, the children memorise the lyrics, the teacher performs the song, and the children sing along (Figure 9). This results in the standardisation of music learning, limiting children's curiosity and comprehension of music. Repetitive activities in the same format can reduce children's excitement and interest, which is detrimental to their development.

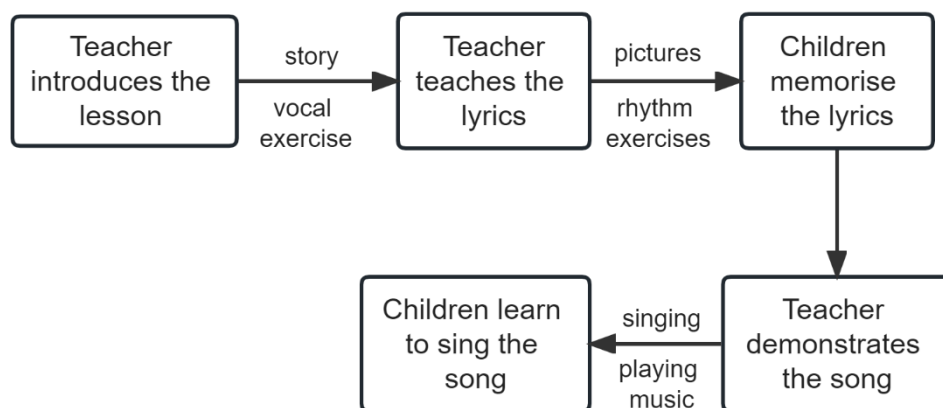


Figure 9. The general flow of events in the music lessons in the middle class of the kindergarten.

3. Lack of Gamification in Music Teaching

Of the four music activities observed, Teacher A did not use gamification to teach music activities to the children. Of the two teachers who used gamification, only Teacher C customised the use of gamification. Literature has found that gamification is more effective than traditional forms of education in terms of the learning process and learning outcomes (Huang, 2022; Liu, 2022; Jin, 2022). The number of distractions in the activities as recorded in the observation sheets is strongly linked to whether the teacher uses gamification in the

teaching sessions: Distractions decreased when the teacher incorporated play whilst distractions increased when the teacher used the traditional way of teaching and singing that usually involved repetitions without engaging their interest.

Factors Influencing Teachers' Use of Gamification

The purpose of gamification in kindergarten music activities is to increase the level of playfulness in terms of teaching content and teaching methods so that children can learn effectively through play experiences. However, from observations and interviews, music activities using gamification teaching method in the middle class of the kindergarten were infrequently implemented, which mainly attributed to the following factors: 1) level of musical literacy among teachers, 2) teachers' attitude towards music, and 3) attention to music activities in the kindergarten.

1. Level of Musical Literacy Among Teachers

Teacher A indicated that she was not good at music and thus was not enthusiastic about conducting music activities. Teacher A equated musical activities with singing also illustrated the limitations in her understanding of music education, and this was shown in both of her music lessons. Teacher A commented

I don't really like music lessons... First, I am not a good musician, and I can only play a few very simple piano pieces. So, music lessons are a bit difficult for me.... I find it difficult to find suitable songs, practise piano accompaniment and create a story for the song. (Teacher A, personal communication, 2022)

Teacher B is interested in conducting music activities, but she found it difficult to prepare a flexible and interesting music lesson due to a lack of professional training. Hence, she would observe and learn from the other kindergarten teachers' excellent lessons, for example, the games in the "Little Snowflake" lesson. Teacher B commented

I find it difficult to prepare different forms of activities for music lessons, but, of course, it could be that I am not professional enough... In fact, in today's lesson, I drew on the other teachers' activities and tried for the first time to include more than one game in the lesson, which I think worked well. (Teacher B, personal communication, 2022)

Teacher C said that she enjoys using gamification in music activities, as she believes that gamification helps the children learn better and makes the teaching process more fluent. However, gamification also brings challenges to lesson planning and tests teachers' musical literacy. Thus, even as the leader of the middle-class teaching and the research team member in the school, she is unable to incorporate play into every lesson. Teacher C described

I am personally interested in music.... However, the preparation process is quite tedious: We have to search for music, create stories, create children's songs, design game sessions... Therefore, when the teacher's musical literacy is lacking, the preparation can be very time-consuming and labour-intensive.... so, I don't use it in every lesson. (Teacher C, personal communication, 2022)

2. Teachers' Attitude Towards Music

The three teachers had different opinions towards music, which affected the quality of the music activities. Teacher A does not like music, nor is she musically competent, which led to her music activities being simplistic and having similar formats for different songs. Teacher B has some interest in music and is willing to learn from others; despite using games that are mostly borrowed from others, they worked well in her classroom. In contrast, Teacher C has a strong interest in music; she attempted to spend time and effort designing an informative and fun lesson to meet the children's interests and needs. The more positive the teachers' attitudes towards music teaching, the more effective gamification is used in the classroom.

3. Attention to Music Activities in the Kindergarten

There is only one music lesson per week. Teacher A viewed that the kindergarten did not allocate sufficient materials for games for the music subject and therefore it was not possible to set up a suitable music environment in the class. In terms of teaching aids, although the kindergarten has some percussion instruments such as bell drums and triangles, their usage rate was very low. In addition to teacher-related factors, the limited number of music activities in the curriculum contributes to the weak position of music education in the kindergarten.

Recommendations To Enhance Teachers' Use of Gamification in Teaching

The current situation of music education in the kindergarten especially in the implementation of gamification can be improved through 1) cultivating the musical literacy of early childhood teachers, 2) encouraging children to engage in musical games, and 3) enriching the types of music activities.

1. Improving the Musical Literacy of Early Childhood Teachers

Kindergartens can provide more training for teachers to enhance their music literacy, such as observing the lesson preparation and classroom activities of other experienced teachers. Meetings can be held where teachers gather to discuss and evaluate observed lessons as well as share ideas on lesson preparation or experiences in conducting activities. This can stimulate teachers' teaching ideas and encourage innovations. An assistance group with members who possess advanced teaching skills can be formed by teachers in kindergartens to provide help to teachers who encounter difficulties. Alternatively, inviting experts in early childhood music education will provide constructive feedback and guidance to the teachers on their educational activities. Professional skills competitions for teachers could be held regularly, such as on piano playing and game design with prizes for the winners as a form of encouragement.

2. Encouraging Children to Engage in Musical Games

Teachers can choose appropriate music to integrate with the play so that children can gradually adapt to and enjoy the musical play environment (Huang, 2022). For example, different music can be added to a sports game to replace the teacher's oral directions: rushing music indicates the start of the game, light music indicates that the game is in progress, and soothing music indicates the end of the game. In this way, children can subtly deepen their understanding of music. When children are engaged in musical play, teachers should motivate them through verbal praise, smiles, affirmative looks or thumbs up. Teachers should give children emotional affirmation, rather than criticism and blame when they fail to complete a

play task. It is also possible to make all aspects of the game playful by giving questions that allow children to rely on exploration to solve problems without the help of the teacher.

3. Enriching the Types of Music Lessons

Traditionally, there are different types of music activities for young children, among which singing can be considered the most common type and the simplest. If the content of music teaching is changed from time to time, including appreciation activities and rhythmic activities, this can enrich the children's musical knowledge and at the same time bring a fresh sense of the game, and consequently maintain their interest in learning music. Teachers might choose a lesson theme based on the weather, the seasons or festivals, for example the children's song "Good New Year" near the New Year, which helps children to understand the song and learn general knowledge in life through the context in music.

Conclusion

Music game is an effective pedagogical tool for acquiring and reinforcing knowledge among children. Nevertheless, little attention has been paid to the implementation of games in children's music teaching activities. Through the analysis of the music activities of the middle class of the Beijing Blue Sky Haiyue Bilingual Kindergarten, the frequency of music activities was low as compared to other subjects in the kindergarten; the content of music teaching was mostly singing activities and the teaching process followed a restricted pattern and lacked diversity; and the teachers used gamification teaching infrequently. Factors affecting the use of gamification in music activities by the teachers include: the teachers' incompetent level of musical literacy caused difficulties in teaching music and limited the choice of teaching content; teachers' preference towards music affect their attitudes in teaching music using gamification; and the low priority given to music activities in kindergartens has led to their current disadvantaged position. In response to the teachers' teaching problems, recommendations to enhance gamification teaching were: firstly, to improve the music literacy of teachers; secondly, teachers can encourage children to participate in music games in the classroom; and lastly, to enrich the types of teaching contents in music courses. For future research, methods and measures to enhance music teaching and gamification in kindergarten can be investigated in greater depth to help teachers provide more effective music education.

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