

# Radio Plays for Babies: Inspiration for Music Didactic Units in the Early Period

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☞ The present study was carried out as part of the project *Radio Plays for Babies: The Role of Aesthetic Experience in the Formation of Healthy Social Relationships*, in collaboration with four members of the University of Ljubljana (the Academy of Theatre, Radio, Film and Television, the Academy of Music, the Faculty of Education, and the Faculty of Theology) and collaborating partners (the Amarilis Music School, the public institution RTV Slovenia – Radio Slovenia, and the Family Study and Research Centre). The study examines the possibility of using the text from the created *Radio Plays for Babies* for planning musical activities and combining them into a musical-aesthetic experience for kindergarten children, and assesses how these activities influence the experience and emotional and movement response of the children. The sample consists of two age-determined groups, the first comprising one- and two-year-olds, and the second made up of two- and three-year-olds. Triangulation of data sources was provided through video analysis and anecdotal records with and without participation. The results show the significant importance of an adult who creates a safe environment for a child's experience and entry into musical activities. Key factors for the child's experience and attention were the musical activity based on the *Radio Plays for Babies* text, along with the included instruments (props) and the adult's performance. The children in the first age group observed the adults' musical performance and needed more time to understand the activities, whereas the children in the second age group imitated the activities of important adults and reacted more emotionally and physically to the planned activities.

**Keywords:** child's response, important adult, musical activities, one- to three-year-olds, radio plays for children

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## Radijska igra za dojenčke: navdih za glasbenodidaktične enote v zgodnjem obdobju

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≈ V prispevku predstavljamo pilotno študijo, ki je bila izvedena v sklopu projekta *Radijska igra za dojenčke (RIO) – vloga estetske izkušnje pri oblikovanju zdravih socialnih odnosov*, v sodelovanju štirih članic Univerze v Ljubljani – Akademije za gledališče, radio, film in televizijo, Akademije za glasbo, Pedagoške fakultete, Teološke fakultete – in partnerjev – glasbene šole Amarilis, Javnega zavoda RTV Slovenija – Radia Slovenija in Študijsko-raziskovalnega centra za družino. Cilj študije je bil preučiti možnosti uporabe besedila iz novonastale *RIO Regratova lučka* za načrtovanje glasbenih dejavnosti in jih povezati v avtentično glasbeno-estetsko izkušnjo za vrtčevske otroke. Preučili smo, kako tovrstne glasbene dejavnosti učinkujejo na doživljanje in pozornost ter na čustveno in gibalno odzivanje. Vzorec študije predstavljata starostni skupini med prvim in drugim ter drugim in tretjim letom. Triangulacija virov podatkov je bila zagotovljena z analizo videoposnetkov ter anekdotskimi zapisi z udeležbo in brez nje. Rezultati raziskave so pokazali na izrazit pomen odrasle osebe, ki ustvarja varno in spodbudno okolje za otrokovo doživljanje in vstop v glasbene dejavnosti. Ugotovili smo, da so bili ključni dejavniki za otrokovo doživljanje in pozornost oblikovane glasbene dejavnosti na osnovi besedila *RIO* z vključenimi glasbili in s pripomočki ter doživeto izvajanje odrasle osebe. Otroci med prvim in drugim letom so pozorno opazovali in potrebovali daljši čas za razumevanje aktivnosti, otroci med drugim in tretjim letom pa so posnemali aktivnosti pomembnih odraslih ter se čustveno in gibalno intenzivneje odzivali na načrtovane glasbene dejavnosti.

**Ključne besede:** od 1- do 3-letniki, glasbene dejavnosti, odzivi otrok, pomembna odrasla oseba, radijska igra za otroke

## Introduction

Radio plays for children belong to the field of radiophonic or radio art and have a long tradition in Slovenia. Radiophonic art for children encompasses various artistic genres, with sound as its primary form of expression. Sound has extraordinary narrative and expressive powers, carrying words, music, noises and silence (Mugerli Lavrenčič, 2019; Sajko, 2006). The central characteristic of radiophonic art is creation through sound (Sajko, 2006), while the visual approach is abandoned (Jan, 2018). The sound approach in this artform poses research challenges, especially in early childhood. During this period, and throughout the preschool period, children are perceptually unburdened and open to new experiences (Sajko, 2006).

Gordon (1990) highlights the acculturation process, in which children adopt sound-musical patterns from the culture they are born into. Le Blanc (1991, in Hargreaves et al., 2006) emphasises critical periods in developing children's musical preferences, susceptibility to different musical styles and open-mindedness to sound (*open earedness*). Due to children's experience and indirect expression of sound, as well as their musical experiences through behaviours and non-verbal responses (Ritterfeld et al., 2005), evaluating their experience of radio art during this period is a particular research challenge.

A literature review in the field of radio art for children indicates a low level of focus on this area and limited research. Most of the relevant studies were conducted at the end of the previous century and compared the effects of radio and television art on the development of creativity and imagination (Greenfield et al., 1986; Runco & Pezdek, 1984; Valkenburg & Beentjes, 1997), as well as on understanding and memory (Beagles-Roos & Gat, 1983). The lack of examination of radio content for the youngest listeners in terms of its artistic impact as a holistic aesthetic experience in early childhood has shifted the focus of contemporary studies to this specific area.

Neuroscience indicates that aesthetic sound experiences play a significant role in a child's development, not only in nurturing specific skills and abilities (Custodero & Johnson-Green, 2008), but in shaping the child's emotional experience and inner world of music. Sound-musical works open doors to emotional regulation and establish the foundations of interpersonal connection and contact (Malloch & Trevarthen, 2009). Contemporary radiophonic techniques offer numerous possibilities for transmitting and shaping sound into a complex auditory experience (Cuadrado et al., 2020). Recent research includes qualitative methodological approaches observing emotional and motor responses and analysing drawings, but less attention is devoted to the study of verbal responses

due to the less developed speech abilities of young children. Zadnik et al. (2023) found that listening to radio plays is challenging for the youngest listeners. It is therefore crucial to consider dynamics, rhythm and dialogicity, as well as the equal interweaving of words, sound/music and silence during the creation of such works. In the performance phase, it is essential to provide a prepared and safe space, and to ensure the child's contact with an adult.

Recently, radio plays for children have faced challenges such as low and inadequate production, a lack of texts for radio formation and a shortage of competent professionals (Páez, 2022). The scarcity of exploration of radio content for the youngest listeners regarding its artistic impact as a comprehensive aesthetic experience in early childhood has led to a focus on this specific area in recent studies. The international project B-AIR emerged as a response to this. It involved nine partner organisations from seven European countries, led by Radio Slovenia. The interdisciplinary project aimed to explore the role of sound in human development from the prenatal stage onwards, and to create sound art for preschool children and vulnerable groups on an artistic online radio channel supported by innovative technology (B-Air, 2022). The project stimulated the creation of new radio plays for children designed for infants, toddlers and preschoolers.

The pressing need for competent professionals in creating radio plays for children triggered the organisation of the research-artistic project *Radio Plays for Babies: the Role of Aesthetic Experience in Shaping Healthy Social Relationships*. The project involved four members of the University of Ljubljana – the Academy of Theatre, Radio, Film and Television, the Academy of Music, the Faculty of Education, and the Faculty of Theology – and collaborating partners, including the Amarilis Music School, the public institution RTV Slovenia – Radio Slovenia, and the Family Study and Research Centre. The main goal of the interdisciplinary project was to develop competencies for future professional profiles in writing and creating radio plays for children in early childhood (radio director, dramaturge, actor, composer, music educator, preschool teacher, multimedia engineer and family therapist). It also aimed to investigate the effects of the aesthetic experiences from the newly created radio play for infants and toddlers on shaping healthy social interactions and relationships.

Within the project, a pilot study was conducted to explore the didactic use of the libretto of the newly created radio play *Dandelion Clock* (*Regratova lučka*) for children aged from one to three years by director Helena Šukljan and composer Nejc Poljanec. The initiative and idea for the pilot study were prompted by the lack of studies and research on the educational possibilities of this artform, as well as the absence of radio plays for children in the kindergarten

curricula, preschool music programmes and the first three years of primary school in Slovenia. The fundamental goal of the research was to explore the didactic possibilities of using the libretto of the newly created radio play for children aged from one to three. The focus was on how to creatively design fundamental musical activities and connect them into an authentic musical-aesthetic experience based on the text of the radio play.

Based on this, the following research questions were formulated:

1. How do musical activities influence the experiences of children aged from one to three years, based on the text of the radio play *Dandelion Clock*?
2. What was the level of attention, and in what ways did the children respond in the emotional and motor domains during the execution of the musical activities?
3. Which factors attract the child's attention during the execution of the musical activities?

## Method

A qualitative research method was used, including observation of the children's behaviours and responses with and without participation, content analysis of anecdotal records, and analysis of video recordings of individual children's responses during the musical activities. Data triangulation was ensured through collaboration with music activity facilitators, external observers and preschool teachers.

## Participants

The study involved 19 children in the first age group in an urban kindergarten, including 11 children aged 1–2 years and 8 children aged 2–3 years. External mentors (university students) ( $N = 3$ ) conducted the music workshops, and preschool teachers and assistants ( $N = 4$ ) participated in the musical activities. Two trained external observers monitored the execution of the musical activities.

## Instruments

For the research, musical activities were designed based on the text of the radio play *Dandelion Clock*. Observers who were participants ( $N = 5$ ) and non-participants ( $N = 4$ ) created anecdotal records with key observations regarding group dynamics, interest, experience and attention in both age

groups. The observation of individual children's responses in both age groups, audio-visually documented, was analysed based on predesigned observation protocols. The observation protocol quantitatively monitored the intensity of responses during the activity for each child and qualitatively described the children's behaviours in the areas of involvement and cooperation, attention, and emotional and motor responses.

### Research design

The research took place in May 2023 in one unit of the *Mladi rod* kindergartens in Ljubljana. The planned musical activities were conducted in two age groups, one- to two-year-olds and two- to three-year-olds, based on the text of the newly created radio play *Dandelion Clock* for infants and adults. In the first phase, the basic components of the text were reviewed and analysed, identifying parts that allowed and encouraged the creative design of musical activities. Based on this, objectives and designed musical activities were formulated and integrated into a meaningful whole in order to achieve a comprehensive musical-aesthetic experience for the youngest children. In the second phase, the planned musical activities were executed and observations and video recordings were executed in both age groups. The central activity of the music workshop was the singing of the new song *Dandelion Clock*, which was created specifically for the workshop. This was intertwined as a common theme in movement-dance expression, a music-didactic game and the execution of sound-motor images during the story narration. The singing of the song was accompanied by a guitar and a recorder. The children were encouraged to engage in the planned activities using certain props: a specially designed picture book was used during the story narration with a dandelion clock made of cotton, which the children could touch and feel; for the execution of the music-didactic game, a white cover placed over the teacher was used to represent the dandelion clock; and rattles were used to create sound images of the wind. The workshops were conducted in the morning during the scheduled time for musical activities. In the third phase, the collected data were processed.

For the quantitative data analysis, a five-point rating scale was used to indicate the intensity of attention (1 – not attentive, 2 – low attention, 3 – medium attention, 4 – high attention, 5 – very high attention). In the areas of involvement and cooperation, as well as emotional and motor responses during the activities (singing a new song, movement-dance expression, creating sound-motor images), the intensity of responses was also monitored with a five-point rating scale (1 – not at all/very little, 2 – a little, 3 – moderate, 4 – strong, 5 – very strong).

A qualitative description of the children's responses in each of the aforementioned observation areas was also provided. An open coding method was used for the analysis of anecdotal records, segmenting and combining data into codes, subcategories and categories (Kordeš & Smrdu, 2015; Mesec, 1998; Štemberger, 2020). From the observers with participation ( $N = 5$ ) and without participation ( $N = 4$ ), approximately 235 quotes of various lengths were obtained. Each observer ( $N = 9$ ) was assigned a random code number (I to VII and edu.), to which the description of the observed group was added (1–2-year-olds and 2–3-year-olds) as well as a sequential number of the statement of each observer. Video analysis is labelled with the sequential number of the statement regarding the sequential numbers of the video description (e.g., Video-2-3years-III-18 is the 18<sup>th</sup> statement of the third observer describing the video recording of the group of 2–3-year-olds).

This research study was approved by the University of Ljubljana, Faculty of Education Ethics Commission.

## Results

Below, we present the results of the intensity levels of the children's responses to the planned musical activities in *involvement and cooperation*.

Table 1 shows that the children in the first age group did not spontaneously engage in the musical activities. They participated actively when prompted by the teacher or students, especially when they were allowed to touch the dandelion clock or instruments (guitar and rattles). However, they encountered certain difficulties, particularly in the music-didactic game, which was perceived as overly complex and was mostly misunderstood; some of the children were even frightened by it. Compared to this age group, most of the children aged between two and three showed a more intense level of involvement. The qualitative descriptions from the observers indicate that the children from both groups observed and followed the musical activities, directing their attention to the events. However, the level of engagement in the execution of the musical activities was higher among the two- to three-year-olds. The children's involvement in the musical activities was linked to the kindergarten routine of communal sitting in a circle involving children, teachers and mentors. Such forms of group activities are familiar to the children; physical contact and the presence of significant adults create a secure environment and space for active participation.

**Table 1***The children's involvement in the musical activities*

Involvement	Intensity of response				
	1 not at all/very little	2 a little	3 moderate	4 strong	5 very strong
	<i>N</i>	<i>N</i>	<i>N</i>	<i>N</i>	<i>N</i>
1- to 2-year-olds	5	4	/	1	1
2- to 3-year-olds	/	1	1	4	2

Note: *N* = 19, 1- to 2-year-olds (*N* = 11), 2- to 3-year-olds (*N* = 8).

An analysis of the quantitative data revealed that the two- to three-year-olds were more intensively and actively involved than the first age group (Table 2). In the latter group of children, it became evident that adult encouragement and presence were crucial for them. Moreover, it was essential for them to be familiar with the particular activity or task; for example, knowing a certain song regularly sung in the group enabled easier engagement and active participation within that activity. Therefore, new musical activities such as singing a new song, a music-didactic game and storytelling could not elicit more active participation from the children because everything was too novel and unknown. On the other hand, with the two- to three-year-olds, it was observed that they directed their attention to activities and were especially influenced by the observing adults carrying out the activities. The experienced performances inspired them to imitate the conducted musical activities, while in less active children, similar to the first age group, attentive observation of the events was observed.

**Table 2***The children's cooperation in the musical activities*

Cooperation	Intensity of response				
	1 not at all/very little	2 a little	3 moderate	4 strong	5 very strong
	<i>N</i>	<i>N</i>	<i>N</i>	<i>N</i>	<i>N</i>
1- to 2-year-olds	6	3	/	2	/
2- to 3-year-olds	/	4	/	2	2

Note: *N* = 19, 1- to 2-year-olds (*N* = 11), 2- to 3-year-olds (*N* = 8).

We were interested in identifying which musical activities attracted the children the most for active participation. Additionally, we investigated



whether the children needed additional external stimuli and which types of stimuli encouraged them to engage in the activities.

Table 3 indicates that the two- to three-year-olds were attracted to all of the activities, while four of the children from the first age group were drawn to the activity of movement-dance expression. In both groups, the children listened with interest to the adults singing, demonstrating a particular fascination with recorder playing, singing accompanied by the guitar, and the male voice (Table 3 – other). We assume that the newly created song *Dandelion Clock* positively affected their aesthetic experience, especially at the emotional level. This was observed through facial expressions, absorbed gazes and internal processing, savouring new content without obvious external vocal responses (Borota, 2006, 2013; Montessori, 2006). Among the two- to three-year-olds, a slightly higher level of participation was present in movement-dance expression while singing, closely linked to their physical-motor development and natural spontaneous need for movement (Marjanovič Umek & Zupančič, 2009). In the same age group, collaboration was observed in creating sound-motor images related to the narrative and reading the story from the designed picture book. This book allowed the children to touch and stroke a dandelion clock made of cotton, stimulating tactile perception. Movement-dance expression was connected not only to singing, but also to the music-didactic game. Interestingly, the children were highly engaged in the music-didactic game, and the musical instruments used – guitar, recorder and rattles – motivated them to participate beyond the content of the game. It was observed that the children with low engagement in previous activities were most actively involved in performing the music-didactic game when they had an opportunity to play the rattles. An increase in participation was also observed through the encouragement of adults, teachers and mentors.

**Table 3**

*Activities that encouraged the children's participation*

Activity	Children's participation			
	singing	movement-dance expression	sound-motor images	other
	<i>N</i>	<i>N</i>	<i>N</i>	<i>N</i>
1- to 2-year-olds	/	4	/	6
2- to 3-year-olds	1	2	2	3

*Note.* *N* = 19. 1- to 2-year-olds (*N* = 11), 2- to 3-year-olds (*N* = 8). One child of the first group did not participate in any of the musical activities.

Table 4 shows that the children from both age groups did not require much encouragement to participate. In the first group, no encouragement was needed, as the children followed the events, observed adult activities, and were attracted to singing the new song, storytelling from the picture book with the dandelion clock, and the music-didactic game. The presence of an adult, especially a familiar person, was significantly important. The teachers, with their physical proximity and the option for the child to sit in their lap, created a secure space for observing the musical activities. Similarly, physical contact with the teacher was needed for the children in the second group. In this group, the physical closeness of an adult shaped a safe environment for observing events, simultaneously providing a supportive setting for imitating the musical activities of the adults. Nonverbal cues, such as touch, a friendly gaze, smiles and gentle guidance to props, were also crucial. Only two of the children from the second group actively participated enthusiastically on their own initiative.

**Table 4**

*Incentives for the children's participation in the musical activities*

Need of incentives	Incentives for the children's participation				
	1	2	3	4	5
	not at all	very little	occasionally	often	always
	<i>N</i>	<i>N</i>	<i>N</i>	<i>N</i>	<i>N</i>
1- to 2-year-olds	3	2	/	3	3
2- to 3-year-olds	2	2	2	2	/

Note. *N* = 19. 1- to 2-year-olds (*N* = 11), 2- to 3-year-olds (*N* = 8).

With the pilot study, we aimed to examine how the planned musical activities combined with the verbal components of the radio play *Dandelion Clock* influenced emotional experiences and motor responses in both age groups. We were interested in emotional expressiveness during singing, creating sound-motor images, and expressing emotions through movement and dance.

From Table 5, it can be seen that the emotional responses of the children in the second age group to the planned musical activities were more intense than those of the first age group. The children in the first group were passive during the activities and did not express themselves much. They showed interest, joy and positive emotions while listening to the story and singing the song with guitar accompaniment, especially when they could play the guitar. They observed the creation of the sound-motor images and were attracted to the dandelion made of cotton, which most of them touched and stroked. However,

they did not understand the didactic game and did not know how to participate in it, except for one child who imitated the teacher's behaviour, and two others who were partially engaged in the dynamics of the game. The rattles attracted them: the children reached out for them, thus approaching the students. Movement-dance expression was present in four of the children, who moved a bit more freely around the space, while the others did not express themselves through movement and dance.

In the second age group, the children responded positively to the musical activities. The highest level of emotional response was present in singing the song and movement-dance expression, which was associated with performing planned movements while singing the song. The children listened with interest to the singing of the new song and looked towards the adults, focusing especially on the singing of the male voice. Compared to the first group, where the children did not sing at all, three of the children in the second group sang with individual syllables. In the field of movement-dance expression, while singing, we observed that two of the children responded with great joy and enthusiasm. Four of the children initially observed the dance choreography with curiosity and gradually actively participated by imitating the movements of the adults, while two of them just observed the activity. It is assumed that the slightly lower level of emotional response to the activity of creating sound-motor images was due to the unfamiliarity of the mentors at the beginning of the workshop, as it was the introductory activity. It was observed that the children cautiously entered the activity and observed the new adults (Table 5).

**Table 5**

*Behaviour of the children in the emotional field*

		1 not at all	2 a little	3 moderate	4 strong	5 very strong
Singing	1- to 2-year-olds	4	5	/	2	/
	2- to 3-year-olds	2	/	/	3	3
Creating sound-motor images	1- to 2-year-olds	8	/	2	1	/
	2- to 3-year-olds	/	3	/	2	3
Movement-dance expression	1- to 2-year-olds	6	2	/	3	/
	2- to 3-year-olds	1	/	1	4	2

Note. N = 19. 1- to 2-year-olds (N = 11), 2- to 3-year-olds (N = 8).

Since *motor response to musical activities* is a primary and universal reaction to music, we were interested in whether the planned activities encouraged

the children to move. We observed the spontaneity of the motor responses during the activities of singing the song and creating sound-motor images. Table 6 indicates that the children in the second age group responded more intensively in the movement-dance domain. They reacted positively to the dance choreography while singing the song. They mimicked the performances of the adults and were particularly drawn to the rocking movements. In some children, slightly different motor performances that were not entirely consistent with the choreography were observed. Only two of the children were not attracted to movement while singing the song or only occasionally responded in a motor manner. In the children who responded considerably or very strongly, we noticed enthusiasm and eagerly consistent imitation following the example of the adults. In the children who responded little or not at all in a motor manner, involvement was only observed in specific activities, such as blowing wind or caressing the dandelion prop made of cotton. In contrast to the second group, it was observed that the children in the first group did not respond in a motor manner or did so only occasionally. Nevertheless, attentive and consistent observation of events and adult performances was detected.

**Table 6**  
*Behaviour of the children in the movement field*

		1 not at all	2 a little	3 moderate	4 strong	5 very strong
Singing	1- to 2-year-olds	9	/	1	1	/
	2- to 3-year-olds	1	1	1	3	2
Creating sound-motor images	1- to 2-year-olds	8	1	1	1	/
	2- to 3-year-olds	1	2	/	1	4

Note. N = 19. 1- to 2-year-olds (N = 11), 2- to 3-year-olds (N = 8).

Given the results indicating *various levels of engagement, collaboration, emotional responses and motor responses*, we were interested in the level of attention from the introductory to the concluding musical activity. It is evident that both groups of children were attentive during the implementation of the musical activities. In almost all of the children from the second group, a fairly high level of attention was observed, as indicated by their active and enthusiastic participation in the musical activities, with or without external encouragement from the adults. A lower level of attention was only detected in one child who did not actively participate in the activities but directed their attention to introducing new elements (guitar, rattle, cover). Some of the children showed

the need for prolonged observation and understanding of the execution of an activity before actively participating in it. A significant member of the group was a girl in a leadership position. Her intense responses, involvement and active participation in activities created trust and a safe, favourable environment for the entire group. In the first group, where the level of responsiveness and participation in the musical activities was low because the children did not understand the instructions, it was observed that most of the children followed the events and observed the activities of the adults with interest. One child withdrew from the group and fell asleep due to tiredness, while the importance of the presence and physical proximity of adults for attentive observation of events was observed in others (Table 7).

**Table 7**

*The children's attention during the activities*

Attention	1 not attentive	2 low attention	3 medium attention	4 high attention	5 very high attention
1- to 2-year-olds	/	1	/	8	2
2- to 3-year-olds	/	1	/	4	3

Note. N = 19. 1- to 2-year-olds (N = 11), 2- to 3-year-olds (N = 8).

Through qualitative analysis, we determined *the factors influencing the children's attention to the musical activities*, which attracted the children's attention to participating in the musical activities in both age groups. The data were obtained using the content analysis method of anecdotal records from the participating and non-participating observers. Table 8 presents the open coding of statements from the participating and non-participating observers.

**Table 8**

*Open coding of the obtained statements*

Codes	Subcategories	Categories
Guitar	Instruments	Didactic aids
Rattle		
Recorder		
Cover	Props	
Picture book		
Soft dandelion clock		

Codes	Subcategories	Categories
Spoken word	Word building blocks	Elements of the libretto integrated into the musical activities
Read word		
Conversation		
Singing	Music building blocks	
Playing the instruments		
Sound images		
Music-didactic game	Game with movement	
Adult male voice	Significant adult	Relationship between the adult and the child
Physical contact		
Passively	Communication	Relationships
Aggressive		
Assertive		

Key factors that captured the children's attention are presented in the categories *didactic aids*, *elements of the libretto integrated into the musical activities*, and *relationship between the adult and the child*. Within the category *didactic aids*, quotes mentioning instruments and props were grouped together. Under the category *elements of the libretto into integrated the musical activities*, quotes describing verbal and musical elements and music-didactic play were collected. The category *relationship between the child and the adult* encompasses quotes outlining the important adult figure and the communication between children and adults. Below, we present selected quotes within each category, indicating the factors that captured the children's attention during the implementation of the musical activities. The selected quotes strongly support and confirm the results presented above for both age groups.

In the category *didactic aids*, it was found that didactic aids such as instruments and props encouraged the children to participate. The children were particularly drawn to the adults playing the guitar and the recorder, and were more engaged when they had an opportunity to play the guitar themselves. They also played the rattle independently. The following quote mentions the joy and enthusiasm among the two- to three-year-olds, as well as their vigorous shaking of the rattle with their whole bodies.

"The children listen to the song, and when the rattle enters they get excited and hide from the wind under the cover. The children play the rattle with great enthusiasm, laugh and shake it vigorously with their whole bodies." (Video\_2-3years\_I - 30)

In the first age group, there was a visible change in the children's responses when they had an opportunity to play the instruments, and this factor introduced a crucial turning point in the musical activities.

"In my opinion, the turning point was made by the guitar, which they could strum, and the rattle, which they could shake." (AZ\_1-2years\_V - 9)

Both groups of children were also attracted to the soft dandelion clock, prepared by the workshop facilitators in a small booklet. The children stroked the soft dandelion clock, with observers noting the quiet, whispering speech of adults inviting the children to engage. We found that, in this segment, the category *didactic aids* is linked to the category *relationship between the adult and the child*, as evident in the following quote.

"The student speaks very gently, in quiet dynamics, almost whispering, the same with the teacher: 'Let's all gently stroke it. How soft it is, the dandelion clock.'" (Video\_1-2years\_III - 5)

Within the category *elements of the libretto integrated into the musical activities*, we collected quotes describing verbal and musical elements and movement in the game. It was observed that musical elements attracted the children to participate. The children embraced the new song and were interested in the props and the new adults in the room.

"The children were excited about the new song and game; they liked the students, were interested in the instruments, and happily followed the workshop leader." (AZ\_2-3years\_II - 10) /.../ "During singing, in anticipation of what will happen, they joyfully imitate the wind and play the rattle." (Video\_2-3years\_IV - 7)

Verbal elements visibly attracted the children, provided the elements were well placed and connected to other categories. The selected quote illustrates how the students envisioned the floor as a blooming grassy area where soft and fluffy dandelion seed heads grow.

"The children sat on the floor, together with the teachers, and listened to the introductory address. The floor represented a blooming grassy area where soft and fluffy dandelion seed heads grow." (AZ\_2-3years\_I - 2)

With the category *relationship between the adult and the child*, it was found that the adult shapes high-quality musical activities, including appropriate (musical) content and didactic aids that excite the children and allow them to enter the musical world. It was interesting to observe the other side of this

relationship: the children who participate enable the adult's receptivity to create a musical-aesthetic experience. Especially in the first age group, a serious and concerned attitude among the adults was observed at the beginning of the activity, when they were busy organising, seemed burdened and did not express trust in the children.

"The turning point was when one of the boys leaned on one of the students, completely softening and relaxing him. From then on, the workshop proceeded more relaxed." (AZ\_1-2years\_II - 5) /.../ "even the faces of all the other adults become more open; they start to behave more relaxed, with a little laughter. It's as if they are no longer afraid that something will go wrong." (Video\_1-2years\_III - 6)

In the musical activities, two-way communication between the adult and the child is always established, and the effect of these activities on both the children and the adults showed relaxation and emotional involvement, consequently affecting the receptivity and collaboration of both the child and the adult. A secure and professionally competent adult strongly influences the two-way communication and engagement of children.

## Discussion

The obtained results indicate that the planned musical activities, based on the content of the radio play for children entitled *Dandelion Clock* – specifically on the libretto – had positive effects on the attention and the emotional and motor behaviour of the children who participated in the study. The children in both age groups responded positively to singing new songs, expressed themselves through movement and dance while singing, and engaged in the musical-didactic game. Musical activities have a strong emotional impact on a child (Voglar, 1987); **music can appeal to children emotionally, calming or delighting them and helping them to regulate uncomfortable emotions and feelings of fear** (Manasteriotti, 1981). The experience of singing by the adults was particularly reflected in the children's facial expressions, with looks of interest and amazement as well as smiles (Marjanovič Umek & Zupančič, 2009). The children were particularly drawn to the singing of the adults, focusing especially on the singing of a male voice. The introduction of the guitar increased the children's enthusiasm, even among those who were initially less interested. A male voice and the sound of the guitar are rare in the kindergarten environment, suggesting that these factors were crucial in capturing and maintaining



attention.<sup>4</sup>

Passive listening was closely related to the internal processing of new songs and absorbing new content (Montessori, 2006). Positive emotional responses were also evident during dance activities accompanying the song. Planned movements, such as swaying, mimicking sending kisses and silent gestures, not only attracted and delighted the children but also helped some of them to relax completely. In the early period, one of the most authentic forms of movement in music is swaying (Fitch, 2016). The selection of movements used to indicate the character and mood in the music influenced the children's spontaneous involvement in movement activity, which is also a universal way of responding to music in the early period (Isenberg, 2006; Levitin, 2013; Stashevska, 2019).

The peak of positive emotional and motor responses occurred during the music-didactic game, the aim of which was to enable the children to audibly perceive the sound of a recorder by performing the melody of the new song. The children responded vocally and physically to the recorder's sound and hid under the dandelion (a prop), creating a new layer of factors that attracted their attention and activated their emotional and motor skills. The sound of the rattle captivated children. The spontaneity of the children in expressing a desire to play the rattle was observed in the second age group, indicating the attractiveness of playing musical instruments during this period. The expressed children's need to play musical instruments (Borota, 2013; Voglar, 1987) encouraged the upgrading of the implementation of the music-didactic game. Playing musical instruments is an extremely attractive activity in this period (Abdullayeva, 2022), enabling children to research sound as they explore different ways of playing (Borota, 2006), improvisation and creation (Bačlija Sušić, 2016). The unplanned change and adaptation to the expressed needs encouraged all of the children in the second group to actively participate and to repeat the activity several times, even after the workshop had ended (Borota, 2013; Voglar, 1987). With carefully planned, structured and designed musical activities and content, we created a stimulating musical environment in which a safe and favourable space for spontaneous musical expression, and emotional and movement response was created (Barbot & Lubart, 2012; Denac, 2002; Jiang, 2023; Lin, 2019). Various studies (Brdnik Juhart & Sicherl Kafol, 2021; Brdnik Juhart et al., 2023) also emphasise the importance of a supportive learning environment in the later stages of education, which helps students to express their opinions, views and ideas, and gives them a sense of security and acceptance.

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4 In the 2020/21 school year, 11,848 preschool teachers and teaching assistants were employed in kindergartens, which is 1.5% more than the previous year. Of these teachers and assistants, 97.3% were female, while only 2.7% were male (Statistical Office of the Republic of Slovenia, n.d.).

In contrast to the concluding musical-didactic game, the children approached the introductory activities with caution: there was a delay in their responses as they became accustomed to the new faces and guidance of the adults. An important role was initially played by the adults already known to the child, who served as a model for the implementation of the activity, as well as representing an invitation and establishing a safe space for involvement and cooperation. The physical proximity, touch and nonverbal and verbal communication of the educators were key factors for less trusting and more careful children (Jankovič, 2008; Janžič, 2008). In the introductory part, when the safe space with the new unknown adults was just beginning to be established, the prop of the designed picture book was the first link between the performers and the children. The possibility of touching and caressing an artificially made dandelion clock provided the first contact with unfamiliar adults based on tactile perception, which is of key importance in the development of perception and learning during this developmental period (Marjanovič Umek & Zupančič, 2009).

Regardless of the level of participation, some of the children, particularly in the first group, actively observed and followed the activities. The fact that they focused their attention on the musical activities even when they were not actively participating confirmed that they were intrigued by the adult performances and followed them closely. The musicality of the adults offered a deeper emotional experience, awakening and sustaining attention. Especially in the first age group, the kindergarten playroom turned into a concert stage, and the music workshop was associated with a concert event, which enabled a holistic perception and experience in the child (Sicherl Kafol, 2001). Immersing children in musical performance by adults had the effect of an authentic musical event (Sicherl Kafol, 2015), thus encouraging silent and distant observation. Integral perception and experience, which is a developmental characteristic of early childhood (Marjanovič Umek & Zupančič, 2009), was achieved both through the planned musical activities, which were connected into a meaningful whole based on verbal building blocks, and the implementation phase with the aesthetic and musical performance of the adults. The children's imitation of the adults, as well as the direct interactions and physical contact of the adults with the children (Jankovič, 2008; Janžič, 2008), provided a comfortable and safe environment for emotional and motor responses. In line with the findings of Silva-Peña et. al (2023), we created *the taste of the classroom* in which the children learned through their senses, feelings, emotions, thoughts and bodies, as well as through the motivation and interest aroused. In music pedagogical practice, a creative environment is linked to a stimulating musical environment

(Denac, 2002) that offers quality activities and content adapted to the developmental characteristics and needs of individuals, and represents the foundation for further development and engagement with music (Borota, 2006).

## Conclusion

Musical activities based on radio play components offer authentic musical-aesthetic experiences for children. For this developmental period, the role of adults is pivotal, providing a secure physical space and fostering interactions between children. Through musical activities, we confirmed the importance of adults and their active involvement. Since children in the early period are extremely sensitive to non-verbal communication and to experience at the level of emotional, kinaesthetic and tactile perception, the aesthetic and experienced performance of an adult enables the child to empathise and enter the world of music through emotion (Ritterfeld et al., 2005; Özbay, 2009). Experienced (musical) performances create comfort and safety for the child, while also serving as a bridge to them and providing them with support to imitate the activity. Planning musical didactic units requires sensitivity in the implementation phase in early childhood. The child's needs and interests should direct the educator's work through the planned musical activities, which should always be performed musically and create an authentic musical-aesthetic experience. Based on the research results, we identify the need for professional reflection on the age delimitation of planning (musical) activities in the first age period (from 1–2 and 2–3 years) in the Kindergarten Curriculum (*Kurikulum za vrtce: Predšolska vzgoja v vrtcih*, 1999). The obvious differences between the children's responses in the two groups of the study indicate developmental distinctions that **underscore the need for professional reflection on age differentiation** in planning objectives and activities in the curriculum for early childhood education.

The results of the study, which showed the positive effects of incorporating radio play elements for children in the early period, indicate possible practical implications of the discussed activities for preschool and early primary school children. It is worth considering the inclusion of radio plays for children as one of the activities in existing curricula and raising awareness among educators about creative approaches to implementing this activity in the kindergarten, preschool and early primary school periods.

Although the results of the study showed the positive effects of incorporating radio play elements for children in musical activities in early childhood, some limitations of the research should also be highlighted. These stem from

the small number of children involved in the research and the one-time implementation of the prepared activities in the two age groups.

In order to obtain more reliable results, it is necessary to conduct a larger number of music workshops over a longer period of time for both age groups. The obtained data should be comparatively analysed to determine other effects of incorporating radio play elements on social and cognitive domains.

## References

- Abdullayeva, Z. S. (2022). Rhythmic movements of preschool age. *Gospodarka i Innowacje*, 23, 209–213.
- B-Air. (2022, December). *O projektu B-AIR* [About the B-AIR project]. RTV Slovenija. <https://www.rtvsllo.si/b-air/o-projektu-b-air/571260>
- Bačlija Sušić, B. (2016). Spontana improvizacija kao sredstvo postizanja samoaktualizacije, optimalnih i vrhunskih iskustava u glazbenoj naobrazbi [Spontaneous improvisation as a means of achieving self-actualization, optimal and top experiences in musical education]. *Školski vjesnik: časopis za pedagoškijsku teoriju i praksu* [School Journal: A journal for pedagogical theory and practice], 65(1), 95–115.
- Barbot, B., & Lubart, T. I. (2012). Creative thinking in music: Its nature and assessment through musical exploratory behaviours. *Psychology of Aesthetics, Creativity, and the Arts*, 6(3), 231–242. <https://doi.org/10.1037/a0027307>
- Beagles-Roos, J., & Gat, I. (1983). Specific impact of radio and television on children's story comprehension. *Journal of Educational Psychology*, 75(1), 128–137. <https://doi.org/10.1037/0022-0663.75.1.128>
- Borota, B. (2006). Otrok, glasba in učno okolje [The child, music and the learning environment]. In B. Borota, V. Geršak, H. Korošec, & E. Majaron (Eds.), *Otrok v svetu glasbe, plesa in lutk* [A child in a world of music, dance and puppets] (pp. 9–52). University of Primorska Press.
- Borota, B. (2013). *Glasbene dejavnosti in vsebine* [Musical activities and content]. University of Primorska Press, Science and Research Centre Koper, Annales.
- Brdnik Juhart, P., & Sicherl Kafol, B. (2021). Music teachers' perception of music teaching at the stage of early adolescence. *Center for Educational Policy Studies Journal*, 11(3), 97–118.
- Brdnik Juhart, P., Povalej Bržan, P., & Sicherl Kafol, B. (2023). Dejavniki glasbenega poučevanja v tretjem vzgojno-izobraževalnem obdobju osnovne šole z vidika učnih strategij [Factors influencing music teaching in the third stage of basic education from the perspective of teaching strategies]. *The Journal of Music Education of the Academy of Music in Ljubljana*, 19(38), 97–116. [https://doi.org/10.26493/2712-3987.19\(38\)97-116](https://doi.org/10.26493/2712-3987.19(38)97-116)
- Cuadrado, F., Lopez-Cobo, I., Mateos-Blanco, T., & Tajadura-Jiménez, A. (2020). Arousing the sound: A field study on the emotional impact on children of arousing sound design and 3D audio spatialization in an audio story. *Frontiers in Psychology*, 11, Article 737. <https://doi.org/10.3389/fpsyg.2020.00737>

- Custodero, L. A., & Johnson-Green, E. (2008). Caregiving in counterpoint: Reciprocal influences in the musical parenting of younger and older infants. *Early Child Development and Care*, 178(1), 15–39.
- Denac, O. (2002). *Glasba pri celostnem razvoju otrokove osebnosti: Priročnik za vzgojitelje, razredne učitelje, učitelje glasbe in glasbenih predmetov v splošnih in glasbenih šolah* [Music in the holistic development of a child's personality: A manual for educators, class teachers, teachers of music and music subjects in general and music schools]. National Education Institute Slovenia.
- Fitch, W. T. (2016). Dance, music, meter and groove: A forgotten partnership. *Frontiers in Human Neuroscience*, 10, 1–7.
- Gordon, E. E. (1990). *A music learning theory for newborn and young children*. GIA Publications.
- Greenfield, P., Farrar, D., & Beagles-Roos, J. (1986). Is the medium the message?: An experimental comparison of the effects of radio and television on imagination. *Journal of Applied Developmental Psychology*, 7(3), 201–218. [https://doi.org/10.1016/0193-3973\(86\)90029-8](https://doi.org/10.1016/0193-3973(86)90029-8)
- Hargreaves, D. J., North, A. C., & Tarrant, M. (2006). Musical preference and taste in childhood and adolescence. In G. E. McPherson (Ed.), *The child as musician: A handbook of musical development* (pp. 135–154). Oxford University Press.
- Isenberg, J. P. (2006). *Creative thinking and arts-based learning: Preschool through fourth grade*. Pearson Merrill/Prentice Hall.
- Jan, A. (2018). *Slišati sliko, videti zvok: Zgodovina radijske igre na Slovenskem* [Hear the picture, see the sound: The history of the radio play in Slovenia]. Slovenian Theatre Institute.
- Jankovič, D. (2008). Spoznavamo drug drugega [Getting to know each other]. In M. Čas (Ed.), *Socialne interakcije v vrtcu* [Social interactions in kindergarten] (p. 55–57). Supra.
- Janžič, N. (2008). Interakcije v prepletu igre in usmerjenih dejavnosti v oddelku prvega starostnega obdobja [Interactions in the mix of play and directed activities in the class of the first age period]. In M. Čas (Ed.), *Socialne interakcije v vrtcu* [Social interactions in kindergarten] (pp. 99–101). Supra.
- Jiang, F. (2023). Research on the role of preschool music education on the quality cultivation of young children. *The Educational Review, USA*, 7(1), 10–14.
- Kordeš, U., & Smrdu, M. (2015). *Osnove kvalitativnega raziskovanja* [Fundamentals of qualitative research]. University of Primorska Press. <https://www.hippocampus.si/ISBN/978-961-6963-98-5.pdf>
- Kurikulum za vrtce: Predšolska vzgoja v vrtcih* [Curriculum for kindergartens: Preschool education in kindergartens]. (1999). Ministry of Education and Sport and National Education Institute Slovenia. <https://www.gov.si/assets/ministrstva/MVI/Dokumenti/Sektor-za-predsolsko-vzgojo/Programi/Kurikulum-za-vrtce.pdf>
- Le Blanc, A. (1991). Some unanswered questions in music preference research. *Contribution to Music Education*, 18, 66–73.
- Levitin, D. J. (2013). Neural correlates of musical behaviours: A brief overview. *Music Therapy Perspectives*, 31(1), 15–24.
- Lin, S. F. (2019). Discovering young children's musical creativity in their everyday life. In Y. Tsubonou, A.-G. Tan, & M. Oie (Eds.), *Creativity in music education* (pp. 59–72). Springer. [https://doi.org/10.1007/978-981-13-2749-0\\_5](https://doi.org/10.1007/978-981-13-2749-0_5)

- Malloch, S., & Trevarthen, C. (Ed.). (2009). *Communicative musicality*. Oxford University Press.
- Manasteriotti, V. (1981). *Prva srečanja z glasbo* [First encounters with music]. Državna založba Slovenije.
- Marjanovič Umek, L., & Zupančič, M. (2009). *Razvojna psihologija* [Developmental psychology]. The Scientific Research Institute of the Faculty of Arts, University of Ljubljana.
- Mesec, B. (1998). *Uvod v kvalitativno raziskovanje v socialnem delu* [Introduction to qualitative research in social work]. Faculty of Social Work, University of Ljubljana.
- Montessori, M. (2006). *Srkajoči um* [The absorbent mind]. The Ursuline Institute for Education and Culture.
- Mugerli Lavrenčič, M. (2019, February 23). *Na portalu SiGledal odslej tudi radijske igre* [Radio plays are now also available on the SiGledal portal]. SiGledal. <https://veza.sigledal.org/prispevki/na-portalu-sigledal-odslej-tudi-radijske-igre>
- Özbay, M. (2009). *Anlama teknikleri: I. Dinleme eğitimi* [Comprehension techniques: I. Listening training]. ÖncüKitap.
- Páez, E. (2022). *Glasba v slovenskih radijskih igrah za otroke* [Music in Slovenian radio plays for children] [Master's thesis, Academy of Music, University of Ljubljana].
- Ritterfeld, U., Klimmt, C., Vorderer, P., & Steinhilper, L. K. (2005). The effects of a narrative audio-tape on preschoolers' entertainment. *Experience and Attention, Media Psychology*, 7(1), 47–72. [https://doi.org/10.1207/S1532785XMEP0701\\_3](https://doi.org/10.1207/S1532785XMEP0701_3)
- Runco, M. A., & Pezdek, K. (1984). The effect of television and radio on children's creativity. *Human Communication Research*, 11(1), 9–120. <https://doi.org/10.1111/j.1468-2958.1984.tb00040.x>
- Sajko, R. (2006). *Poetičnost zvoka: Ustvarjalne možnosti radijske igre za otroke* [The poetics of sound: The creative possibilities of the radio play for children]. Mariborska knjižnica: Revija Otroci in knjiga.
- Sicherl Kafol, B. (2001). *Celostna glasbena vzgoja: srce, um, telo* [Holistic music education: Heart, mind, body]. Debora.
- Sicherl Kafol, B. (2015). *Izbrana poglavja iz glasbene didaktike* [Selected chapters from music didactics]. Faculty of Education, University of Ljubljana.
- Silva-Peña, I., Hizmeri, J., Hormazábal-Fajardo, R., Rojas-Rodríguez, B., Jara-Illanes, E., & Gustavo González-García, G. (2023). Practicum of early childhood teacher students in pandemic times: A narrative perspective. *Center for Educational Policy Studies Journal*, 13(4), 15–35.
- Stashevska, I. (2019). Psychophysiological and musical-psychological aspects of preparedness of preschool children to instrumental music education. In O. V. Kvas, O. Nevmerzhytska, M. V. Pahuta, & I. O. Stashevska (Eds.), *Methodological culture of an educator: History and modernity* (pp. 122–141). Liha-Pres.
- Statistical Office of the Republic of Slovenia. (n.d.). Slightly more teachers in basic and in upper secondary education. Retrieved June 19, 2024, from, <https://www.stat.si/StatWeb/News/Index/9632>
- Štemberger, T. (2020). *Uvod v pedagoško raziskovanje* [Introduction to pedagogical research]. University of Primorska Press.
- Valkenburg, P. M., & Beentjes, J. W. J. (1997). Children's creative imagination in response to radio and

television stories. *Journal of Communication*, 47(2), 21–38.

<https://doi.org/10.1111/j.1460-2466.1997.tb02704.x>

Voglar, M. (1987). *Otrok in glasba: Metodika predšolske glasbene vzgoje* [Child and music: Methodology of preschool music education]. Državna založba Slovenije.

Zadnik, K., Habe, K., Rakef, S., & Kompan Erzar, K. (2023). Doživljanje radiofonskih pravljic pri predšolskih otrocih [Preschool children's experience of radio fairy tales]. *The Journal of Music Education of the Academy of Music in Ljubljana*, 19(39), 11–34. [https://doi.org/10.26493/2712-3987.19\(39\)11-34](https://doi.org/10.26493/2712-3987.19(39)11-34)

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