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MUSICAL PREFERENCE IN EARLY CHILDHOOD: AN ANALYSIS OF MUSICAL AND CULTURAL CHARACTERISTICS OF CHILDREN'S REPERTOIRE

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Abstract
This article aims to discuss musical preference and children's repertoire in early childhood based on a research with 33 children, aged between 8 months and 4 years old, from the program Music Education for Babies and Children of the Federal University of Bahia, Brazil (2019). In this article we will, initially, present a literature review on the development of musical preference in the early childhood, focusing on how children process and interact with sounds and music. Data were collected through literature review, field diary, questionnaires and video recording. The music classes were held once a week with 50 minutes of duration. During this period, 138 performances were cataloged. The discussion and analysis will focus on the musical and cultural characteristics of the songs performed during the music class, trying to identify how it connects with the children's social and cultural context. The results indicated that the children live in a rich musical environment at home and at school. Although the songs experienced in both contexts come from different genres and styles, they chose traditional children's song for their performances. These songs have strong influences from the main ethnic groups that formed Brazilian culture – Indigenous, Portuguese, and African. From the Portuguese influence we inherited a repertoire formed by simple melodic lines, short melodic intervals, predominance of the major key, anacrusis, and themes about social interactions and daily activities. The indigenous songs bring themes related to the forest, animals, flora, among others. African songs address themes about life, nature and religion. It is common to find words in local dialects such Yoruba and Swahili, and the rhythm is highlighted with a wide variety of percussion instruments. In the conclusion, we discuss how music teachers can contribute to children's musical development, expansion of their repertoire and connecting with their culture.
Keywords: *early childhood, music preference, repertoire*

Introduction

Music, as a social practice, can be experienced in different ways: through singing, listening, playing, and dancing, among others. At the same time, music has multiple meanings and functions in people's lives, especially in the contemporary society. According to Boal-Palheiros, *"…music is accessible to most children and young people in a variety of contexts and listening to music is one of their main leisure activities, at least in western societies. They listen to music in public places and through digital devices, alone or with family and friends"* (Boal-Palheiros, 2006, 305). Adults, family and teachers have a significant influence on providing children with musical experiences and mediating aspects of their cultural environment.

Children, from birth, interact with music in different ways and show preferences for certain types of sounds and music. Several studies indicate that although our interest in music is innate, musical preference is formed since childhood and is influenced by the sociocultural context. Parents generally seek to create an environment rich in musical stimuli, selecting children's music, videos and movies, which will become part of the child's musical repertoire. Later, the school will also add as another musical environment to which they will interact with.

This qualitative study analyzed the musical repertoire of 33 children aged between eight months to four years, enrolled in the project *Music Education for Babies and Children*[1], created by the Music Faculty of the Federal University of Bahia (Brazil). The music class had a specific moment when the children were invited to individually perform a song of their choice to their peers. In this context, during April to June of 2019, were catalogued 138 performances by the children. To identify and understand these musical preferences, a questionnaire was distributed among parents and/or legal guardians. It sought to map the repertoire experienced at home, and other aspects of the familiar musical environment such as: the family's relationship with music, whether the parents or relatives played an instrument or whether the child had one, the moments of exposure to music, including TV programs, cultural activities such as concerts and plays.

Although this research has a broader scope, for this article we are going to make an excerpt, focusing on the development of musical preference, the musical and cultural characteristics of the songs performed during the music class and how this relates to the children's repertoire. We're considering children's repertoire songs/music experienced with the family (at home and at social/cultural events), and songs/music presented in the classroom by music teachers. In the conclusion we offer possibilities for the music teachers to contribute to the children's musical development and consolidation of its identity through the connection with its culture.

[1] Program created by the Music Faculty of the Federal University of Bahia (Brazil) in 1963 with the aim of establish a meaningful relationship between the community and the University. Initially, was intended for with children from 6 to 12 years old and in 1991 started the classes for babies, toddlers and preschool children (0 to 6 years old). By the time that this research took place (2019) the program had 143 children, who were organized in 15 classes.

Aspects of Children's Development of Musical Preference

The cultural and affective aspects play an important role in the children's relationship with music. Their musical preference is also closely related to their cognitive development, that is, their ability to process and understand sounds. This can largely explain their preference for one specific sound, song or music and for repetitions. Therefore, we think it is relevant to present how this process happens, in first place, and then discuss the cultural and social characteristics of the repertoire collected.

Babies come into the world with sophisticated mechanisms to identify and process sound events. In the intrauterine life, it already reacts to external sounds through bodily movements and changes in the heartbeat. With only three days of life, they are able to recognize and demonstrate preference for the mother's voice over the voice of another woman (DeCasper, Lecanuet et al, 1994). Until three months old, the preference is for low notes and sounds, and this will only change at 6th month of age, when they start to prefer higher sounds (DeCasper & Fifer, 1980).

In the first months, the baby starts to interact more directly with the sounds around, imitating, testing and improvising melodies. In the singing of babies, words are rarely used. According to Parizzi (2006), babies *"start to adapt their body movements to the pulse of the music they are listening to and this explains the 'dance' of babies during the music classes when they hear a song"* (p. 43). According to Gordon (2012), throughout the first year of life, babies *"compensate for their inability to sing and speak, listening carefully to music and speech". In this way, "until they are eighteen months old, the more music a child listens to (...), the better prepared they will be to learn to sing"* (p. 307). For this, it is important that the baby's musical environment is rich in sound and musical stimuli.

Parizzi (2006), states that between the ages of two and three, the child *"starts to make attempts to imitate songs heard in his/her environment"* (p. 43). Repetitions in melody and rhythm begin to be noticed, and, although there is still no stable tonal center, you can sometimes observe some tonal coherence within each phrase. These and other characteristics, such as melodic inaccuracy and variations in pitch and duration, were observed in the children's songs during the music classes.

We also noticed that children in the 2 to 3 age range showed more independence when singing, which did not occur in the 0 to 2-year age group. If before they depended more on the adults' voice as a reference, in this new stage it was possible to notice the child's voice in the foreground. From the age of three, children are able to reproduce entire songs of their culture. In the 3 to 4 age group, it was noticed that the children's tuning was still imprecise and was maintained only for certain parts of the song. According to Sloboda (see Parizzi, 2006), the precise tuning of the intervals occurs only later.

Summarizing, singing is a highly complex process, and involves vocalization in infanthood, linguistic codes of early speech, enculturation of language and the learning of conventions and symbols associated with this. Advances in technology show that singing is a whole brain activity probably uniquely involving the integration of the musical, speech, visual motor and emotional systems of the brain (Welch, 2003).

Family Environment and Musical Preference

According to Ilari (2003), *"from birth to 10 years of age, the child's brain is in full development and presents the best 'conditions' for learning, the so-called windows of opportunity"* (p. 14). During this period, the responses to stimulation are more efficient. Thus, it is important that the family environment provides a wide repertoire and a variety of musical experiences. Egerman (2019) suggests that *"parents should take every opportunity to spend time with their children and explore the world of music together, while children are still open to new and unfamiliar music (which often means being younger than ten years old). This could be through simply putting music on in the background while the child is playing, however it could also be used as a social activity within the family. Here, parents could play a piece of music at home and then talk to their children about it (i.e. share how everyone in the family experiences the music and discuss, for example, reasons why), or they could take their children to concerts and live music events that create special memories that are remembered positively* (p. 4).

Gordon (2003) highlights the importance of an informal experience in music, in which *"children are placed in every possible way in contact with the music of their culture and encouraged to absorb this music, along with the inherent syntax based on that culture"* (p. 315). In this regard, the family plays an important role in mediating between the child and his/her sociocultural environment. In this research, all parents participating in the survey stated that they had musical moments with their children, singing, listening to CDs, watching DVDs, and attending live music events.

Cultural and Musical Characteristics of Brazilian Traditional Children's Songs

The results showed that the children involved in this research live in a rich and vibrant musical environment provided by the family and the cultural context. Even though they are surrounded by music from different backgrounds, genres, styles and periods, they have chosen traditional children's song for their performances. From the 138 performances cataloged, only one – Baby Shark, wasn't from traditional children's music.

Childhood songs are an intrinsic part of a child's life. After birth, they are soothed by their mothers with lullabies, and play with singing toys. In the same way, children's musical games are present in all cultures and are shared trough the oral culture. They include singing, moving, dancing, gesturing and imaginative thinking, like in the *wheel plays.* According to Silva (2016), the Brazilian games use melodies that vary from a single note to the full scale; the rhythmic games, without melody, have the recited word as their main element; and the rhythmic-melodic and melodic-rhythm games comprise the repertoire that combines both forms, with a greater or lesser predominance of melody or rhythm.

For the ethnomusicologist Hortélio (2012), the traditional childhood music is a song to be played with and it represents our first language. The practice of singing toys promotes the sense of belonging and nourishes the development of the cultural identity. The strength of a people's identity depends on the exercise of its culture, on

the knowledge of its history, and presupposes a broad and detailed effort in search of their identity.

Brazil was colonized by Portugal and, thereupon, our traditional children's songs have a strong influence of the Portuguese culture. From them we inherited a repertoire formed by simple melodic lines, short melodic intervals, predominance of the major key, anacrusis, and the themes are often about social interactions and daily activities. The use of the quatrain is also an important characteristic inherited from Portuguese songs (Giacometti, 1981).

According to Silva (2016), from the indigenous tradition we inherited traditional children's songs with themes related to *"hunting animals, domesticating birds, monkeys and lizards, making and playing with the bow and arrow, making small boats*" (p. 32). There are many tales about these themes too, with animal voices and nature sounds. Currently, more than 160 languages and dialects are spoken by indigenous peoples in Brazil. There are songs entirely in the indigenous dialect, and there are songs in Portuguese, with some words in the dialect of the tribe from which it originated.

Regarding the musical aspects, there are a predominant use of few notes and almost no tempo variety during its performance. The rhythm is binary or ternary and sometimes they alternate in the same verse. Each tribe has its specific musical instruments, predominantly wind or percussion, made of materials found in nature.

African culture is a large part of Brazil's identity. Salvador (the capital of biggest state of the northeast region Bahia, which was the first capital of colonial Brazil) concentrates the largest black community outside the African continent. The city has a unique and vibrant culture that can be experienced in the arts, music, dance, literature, gastronomy, fashion, religion, among others. The African influence on Brazilian children's songs is marked by different rhythms, complex patterns with syncope and polyrhythm. These rhythms are played with wide variety of percussion instruments and require good coordination. The traditional songs also have a melodic and harmonic plurality, with themes about life, religion, nature, resistance, traditions and faith; it is common to find words in local dialects such Yoruba and Swahili (Silva, 2016).

It's important to mention that the traditional African languages don't have a word that specifically means *music*, meaning a melody sung and/or played outside the context of dance and social fraternization. Movement, dance, singing and rhythm are inseparable expressions. There is no audience, the musical event is experienced by all the people present. Sodré highlights that currently, "*due to the influence of western culture, the words 'muzik', in Kenya, and 'musiki', in Cameroon have been incorporated"* (Sodré, 2010, 19).

During this research some songs were performed one or more times by the children at the music class. The song *Alecrim Dourado* (Golden rosemary), was performed 13 times. It's a good example of a traditional children's song for its simplicity and expressiveness. This song is originally from Portugal and was included into the Brazilian traditional repertoire with a few adaptations. The theme is about nature, a rosemary, but also mentions a beloved person. The Brazilian version of the lyrics (see Table 1 and Figure 2) is very similar to the original, with some substitutions and adaptations.

Table 1. Lyrics of the song "Alecrim Dourado"

Portuguese version (original)	***Brazilian version***
Alecrim aos molhos – ***Rosemary in bunches***	**Alecrim Dourado –** ***Golden rosemary***
Alecrim, alecrim aos molhos Rosemary, rosemary in bunches *Por causa de ti choram os meus olhos* Because of you my eyes cry ***Ai meu amor, quem te disse a ti*** Oh, my love, who told you ***Que a flor do monte é o Alecrim*** That the flower of the hill is Rosemary *Alecrim, alecrim doirado* Rosemary, golden rosemary *Que nasceu no monte sem ser semeado* Who grew in the hill without being sown	Alecrim, alecrim dourado *Rosemary, golden rosemary* Que nasceu no campo sem ser semeado *Who was born on the hill without being sown* **Ai meu amor, que me disse assim** *Oh, my love, who told you* **Que a flor do campo é o Alecrim** *That the flower of the hill is Rosemary* Alecrim, alecrim miúdo *Rosemary, small rosemary* Que nasceu no campo perfumando tudo *Who grew in the field, perfuming everything*

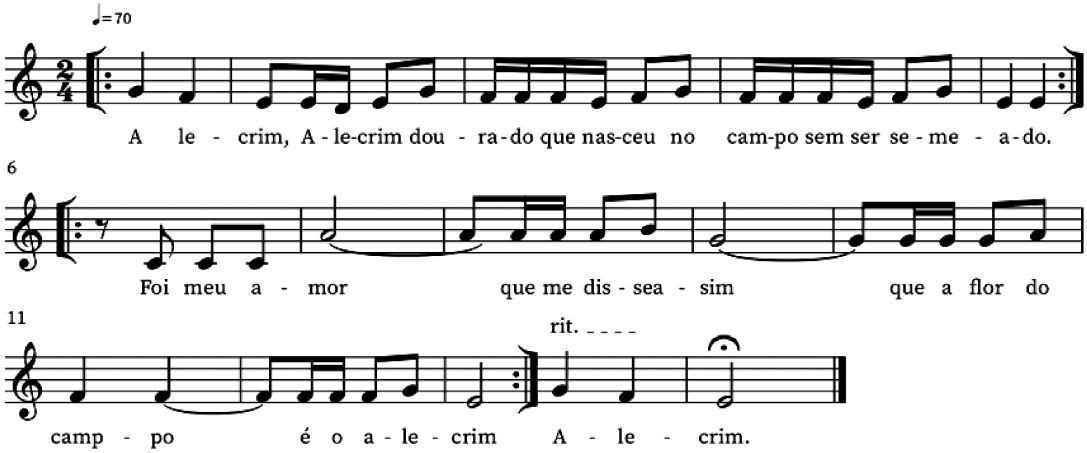

Figure 2. Melody of the song Alecrim Dourado

The melody of the first stanza is simple and in a stepwise motion. The refrain has an ascending interval of a major sixth and the melody descends in intervals of a third. The tonality is C major with the harmony starting with the dominant chord.

In addition to Portuguese, Indigenous and African influences, children's songs of oral tradition had European influences from the 19th century onwards, when Brazil opened its ports to immigrants from several European countries. Thus, there was the assimilation of new ways of playing musical games, especially nursery rhymes, riddles and choice formulas. Another contribution was the words in new languages, which underwent changes and adaptations to Portuguese. According to Silva (2016), it is interesting to observe that the adaptations of the text to what the child understands is the most common occurrence in the childhood repertoire. The solutions that were found to replace misunderstood terms, or those which are not part of their vocabulary, are very creative.

Aim and Questions of the Research

The main goal of the research was to investigate the musical preference and map the repertoire of 33 children aged between eight months and four years. The secondary goal was to catalog the songs chosen by the children to perform in the music class; map the musical environment of the children in the family life, and analyse the musical and cultural characteristics of children's repertoire. Therefore the research questions were*:*

- *What songs are the children performing in the music class?*
- *Where do they come from?*
- *How does it relate to their family and cultural environment?*
- *What are the musical characteristics of children's repertoire?*

The music teachers' team is formed by students from the Music Education undergraduate course of this University. This is an important locus of practice for training and pre-service music teachers. They work in pairs, where one is a more experienced, and the other, less experienced. This methodology is based on collaborative teaching and peer learning approach (Green, 2008). During the planning they must negotiate and make decisions regarding contents, activities and repertoire for the classes. This requires abilities such as open communication, confidence, empathy, responsibility, negotiating power and epistemological views.

The methodology used for the music classes is based on the C(L)A(S)P Model (Swanwick, 2003). The main goal of the program *Music Education for Babies and Children*, regarding the children, is creating opportunities to experience music through singing, listening, playing musical games, moving, improvising and performing. An additional goal is to learn the basic music elements through musical activities and a broad music repertoire of traditional children's songs, Brazilian popular songs and world music. A special attention is paid to the development of creativity. The activities are always related to the semester theme and to the repertoire. They are conceived to be developed both during classes and at home, in order to reinforce the contents learned in class and provide an extra element in the relationship between parents and children.

The structure of the lesson plan and the sequence of activities are maintained throughout the semester and, therefore, are quickly internalized by the children, reducing anxiety and fear of the unknown, since they already know what will happen next. The lesson plan is organized in 12 parts: moment of free experimentation on instruments, welcome song, and circle song with body movements, sound exploration of a novelty instrument, singing the musical scale, rhythmic text, song with instruments, free moment, music appreciation, relaxation, children's performance and a goodbye song.

The first step of the research was to catalogue children's personal repertoire performed in the music classroom. During the moment of performance, all the children are invited to perform a song of their choice to their peers. They are free to dance or play an instrument. The accompanying person (the adult that brings the child and stays with her/him during the class; they participate together in the class activities) encourages the children to participate in this moment. In the 0 to 2-year age

group, the adult sings for them, and the baby frequently responds with some bodily movement or babble.

In the classroom, performance must have a broader meaning, far from the expectation of technical and virtuosic performances and much closer to expressiveness, commitment, meaning and, above all, personal involvement. However, whatever the level of complexity, it is necessary to strive for achieving the best artistic quality so that the result is significant, expressive and relevant (França & Swanwick, 2002).

Methods and Sample

This research was qualitative with a descriptive approach, used to observe, catalogue, describe and analyse the characteristics of a phenomenon, establishing relationships between variables (Dencker, 2000). In this case, we catalogued the title of the songs presented by the children at the performance moment and analysed the data from the questionnaires about the family's musical environment. Then, we analysed the repertoires and their cultural and musical characteristics.

Data were collected through bibliographic research, field diary, questionnaires and video recording. During the literature review we selected and studied articles on topics such as musical cognition, cognitive and musical development of children, starting from the new-borns to 4-year-old children, musical preference in early childhood, musical and cultural characteristics of Brazilian traditional songs among others.

The classes were given by two pre-service music teachers, both on the 7th semester of the Music Education undergraduate course. During the period, the music teachers had weekly meetings with the advisor and coordinator of the program, for planning and mentoring. The classes took place from April to June, 2019. In this period, a total of 32 lessons were given to the three groups. The music classes were held once a week with 50 minutes of duration. The children participating in the research are from three different classes, grouped by age: 0 to 2 years old (10 students), 2 – 3 years old (10 students) and 3 – 4 years old (13 students).

From the 33 questionnaires distributed, only 21 were answered. The questionnaire contained 18 open questions about children's musical experiences with the family: when or at what time (on which occasions) the child listens to music, how it happens, the presence of a musical instrument in the house (of a family member or the child's home), the family's musical repertoire and preferences, music devices that the children have access to, and how the choice is made when buying or accessing this material, activities that involve music (in addition to music classes), moment of the class that they like best, among others.

According to Dencker (2000), the survey involves the direct interrogation of people whose opinion about the problem under study is imortant, then, through quantitative analysis, to reach conclusions corresponding to the collected data. This approach uses quantitative analysis and allows the generalization of conclusions to the total population and thus to the universe surveyed. In this context, data is more descriptive than explanatory.

Research Results

The research used the phenomenological-hermeneutic approach to analyse the parents' narratives and perceptions about their musical environment and practices. During the occurrence of the phenomenon intended to be studied, the researcher must keep an opened mind to the understanding and interpretation of what may appear. According to Esposito (1994), throughout history different meanings have been assigned to the word *hermeneutics* and are now considered as an understanding and interpretation that allows us to search for the meaning of work as a human production, from the context in which it is shown.

During the study, music teachers were encouraged to ignore preconceptions and understand that the results do not necessarily need to correspond to a previous expectation of the researcher. For Rios (2006), this does not require 'neutrality' from the researcher, nor does it consider it possible to do so. So, if the researcher is part of the knowledge production process, he/she needs to assume an attitude of availability and honesty, considering his/her responsibility in this process. It is always a person who carries out the investigation: considering knowledge as having a historical ethos, science takes place in the context of human relations.

The phenomena under the research (words, gestures, actions, symbols, signs, texts, artifacts, works, speeches, etc.) need to be understood. That is, research consists of capturing the meaning of phenomena, knowing or unraveling their meanings. Understanding presupposes an interpretation, a way of knowing its meaning that doesn't happen immediately; which is why we need interpretation (hermeneutics). According Fazenda (2008), hermeneutics is understood as inquiry or clarification of assumptions, modalities, and principles of interpretation and understanding.

Considering the performances of children from the three classes, 138 individual performances were catalogued. Of these, 52 were songs performed only once, 18 were songs performed twice, and 68 performances were songs performed three or more times. Thus, we can say that 62% of the total performances were repeated songs, suggesting the appreciation for repetition, a well-known childhood characteristic.

Studies by Zajonc (1968) and North & Hargreaves (1999) have already demonstrated that we are inclined to like music to which we have been exposed before. In Zajonc's (1968) research, participants increased their preference for a stimulus when it was presented more often. According to Egermann (2019), this happens for two reasons. The first is about the comfort of familiarity, knowing that there are no negative factors associated with that experience. The second reason has to do with learning music patterns and schemes through repetition, which means that when we listen to music, we are probably unconsciously predicting what will happen next in the music. Knowing music well, we can reduce the number of errors in forecasts, which can be perceived as useful and pleasant.

Results

The analysis of children's repertoire showed specific characteristics and was divided into school repertoire (music class) and home repertoire (outside of school). Although children experienced a wide variety of music in both contexts, the songs chosen for

their classroom performances, except for one, were Brazilian traditional children's songs. This choice shows children's appreciation for simple and repeating melodies. Such songs use short melodic intervals, very simple rhythms, and a large amount of repetition of musical phrases (Trehub & Trainor, 1993). In the same way, Schellenberg and Trehub (see Ilari, 2002) suggest that babies have a certain preference for simple harmonies as opposed to overly complex harmonies, which in a way justifies the use of songs with very simple accompaniments when teaching babies.

A. The music class repertoire

The music class repertoire included welcome and goodbye songs, instrumental music, didactic songs highlighting a specific musical element, Brazilian folk songs, Brazilian popular songs, and traditional music from around the world. The semester theme was *Singing the World,* and the goal was to create opportunities for students to appreciate, learn and explore music freely, so that they are active subjects in the musical learning process, in a playful, integrative and socializing way. Among the main characteristics of the music class repertoire, we highlight the cultural diversity, variety of genres, musical instruments, timbre and harmony. We also highlight the importance of rhythm for the music education process.

In addition to songs from the world, we used songs from the Brazilian oral tradition as a way of highlighting and recognizing foreign influences. By experiencing music from different cultures, they might learn to appreciate and understand the culture of their own country. The children might be more likely to show interest in those cultures and they might be more likely to educate themselves about them (Egermann, 2019). In this sense, Swanwick (2003) recalls that only when provoked by encounters with cultural practices from other places, do we pay attention to musical 'accents', including our own.

B. The family musical environment

According to the data collected from the questionnaires, children spend a considerable amount of time experiencing music passively by themselves on digital devices. During this activity they listen/watch songs from cartoons or children's movies (TV and streaming services), and songs from DVD's produced by groups focused on making music for children. Parents said they rely on children's programs as entertainment and learning. The selection is made through internet search, school recommendations, and visit to bookstores, gift from family members or suggestions of other mothers with babies or children in the same age group. Among the factors that determine the repertoire are programs aligned with ethical values and principles of the family, the child's preferences and songs that belong to the affective memory of the parents.

The data also showed that the repertoire experienced by the children in the home environment included family musical preferences, formed by popular genres such as rock, reggae, samba, jazz, blues, and classic music, among others. Gordon (2000) adds that recordings for adults are not only adequate, but also recommended, and the more keys, metrics and times the children know, the better.

All the parents say they share musical moments with their children. The duration of the interactive music experiences with the child in the 0 to 2 year age group was 30 to 45 minutes per day (100% of the answers). It was interesting to observe that this time increases in the 2 – 3 year age group: more than 60 minutes per day (75% of the answers). This may be related to the child's more active music making as they grow up. According to Gordon (1989), during the *acculturation* stage the baby is collecting and absorbing music, and from the age of two, the child can already develop the *imitation* stage, reproducing and coordinating what they hear with bodily movements. This increase in children's active music making can explain why it requires more time of interaction. Then, at the age of 3 – 4 years, we observed that the time dedicated to shared music experiences decreases again, taking from 30 to 45 minutes per day (in 50% of the cases). This does not mean a decrease in the quality of music making, but it may indicate that children in the *assimilation* phase have already acquired more control and coordination of their movements. This acquired autonomy also allows children to have musical experiences by themselves (Gordon, 1989).

The results of this study showed that the situations when music is experienced with the family vary:

"Sometimes we lie in the hammock and sing" (J.L.);

"At night, bedtime is usually accompanied by lullabies" (M.R.);

"Sunday when dad picks up the guitar and sings/plays for us" (B.G);

"Before dinner or when he is in a bad mood" (F.H);

"Sometimes, when waking up, when taking a shower, when brushing our teeth, when we go to concerts and theatres" (A.B.);

"At home we have moments where we play in 'band', alternating the instruments" (O.D.).

When listening to songs, children usually interact by singing, dancing or playing an instrument. They have musical instruments at home; the most common is the tambourine, drums, toy guitar, rattles, shaker eggs, among others.

According to the data collected through the questionnaires, children react in different ways to the parent's favourite music: they dance, laugh, observe, sing, recognise and rarely reject. Younger children demonstrate that they like the music through body movements and vocal sounds. In these cases, music works as an element of catalysis in the process of forming bonds, strengthening existing links and helping to create new ones. This could explain children's joy while listening to their parent's favourite music. The emotional bond shared with grown-ups and the fact of seeing the adults happy when listening to their favourite repertoire, make children 'absorb' and share this feeling.

For Parizzi (2006), *"baby's musical behaviour with the intention of attracting people's attention can be considered an initial form of expression of their social identity as a member of a group"* (p. 41). Trevarthen (see Parizzi, 2006) adds that when a six or seven-month-old baby recognizes a song and moves with it, it is as if he/she was being identified by its name, as if he/she was showing his/her 'social self' in the affective

sphere of his/her family life. Regarding this aspect, Egermann (2019) points to the growth of social identity as another influence on the development of the musical preference, since the more similar two people's music taste is, the more likely these two people will bond, because they are likely to share similar human values.

Agreeing with Burnard (2013), *"singing is a unique form of embodied knowing and a vital experience in all cultures. The experience of singing alone and together is natural and enjoyable for all people and offers opportunities to inspire creative musical expression. Coming together to sing is a form of peace-making, a spiritual journey and a powerful way to connect and release the musical imagination in ways that are personal and social, instructive and playful, and communal and collective"* (p. 69).

For some children, performing for the class presents a great challenge, even when accompanied by an adult, and requires the development of emotional skills to overcome shyness and apprehension. During the research we realized that it is important to create a welcoming environment that provides trust and encouragement. This can bring the group together and promote music learning.

Conclusions

1. The children's personal identity is developed through interactions with social groups, with the environment (neighborhood, city), culture, among others. Music is an important tool in mediating the relationships with others, with the world and yourself. Our connection with culture promotes a sense of belonging and sharing musical preferences can strengthen bonds, bringing people together. This can be observed in the adolescence, when social groups can be formed according to the shared genre and music style.
2. The results of this research suggest that sharing your musical preference through individual performances for the class can benefit the musical, social and cognitive aspects of children's development. According to parents, among the changes observed during the research were: greater sociability, interest in learning new songs and playing an instrument aiming to present this in the music class, more pleasure in singing, taking initiative in memorizing song lyrics, improved verbal communication, interest in rhythms and dancing, among other things.
3. Parents and teachers must work together for the development of the child's musical preference. According to the questionnaire survey results, the parents who participated in this research were interested in providing their little ones with the best conditions and opportunities for learning. Teachers should cultivate a good relationship with them, asking for and welcoming repertoire suggestions. They should also promote a rich and diverse musical environment in music classes, sharing with the families the repertoire used in a classroom, so that they can be experienced at home several times. Finally, we believe that sharing musical experiences with family and classmates through individual performances can strengthen the affective bonds, promote mutual understanding, develop musical abilities and create memories that can last a lifetime.

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TEACHERS' EXPERIENCES OF DISTANCE MUSIC LEARNING IN GRADES 3 TO 6 IN FINLAND

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Abstract
The purpose of this study was to explore teachers' experiences of distance learning (from here abbreviated DL) in music (from here abbreviated DLIM) classes with pupils in grades 3 to 6. In March 2020, Finland moved to distance education due to the COVID-19 pandemic. Preparing for distance education started very quickly and distance learning was a whole new way for teachers to implement teaching. DL presented challenges to music teaching, as it relies on common playing and music making, and studying traditionally takes place in contact with other pupils.
Two main questions were addressed in this research: In which ways did teachers implement DLIM? and What experiences did teachers have with DL? The data was collected by interviewing nine classroom teachers and music subject teachers. The interviews followed the principles of the theme interview, and the material was analysed using data-based content analysis.
The results show that teachers felt common playing, music making, and singing were challenging, but other parts of music teaching were conducted in a diverse and functional manner. Teachers intended DLIM to be an uplifting and lightweight subject to help teachers and pupils cope with a challenging teaching situation. Teachers felt that distance education required more work than the typical in-person education, and much more time was spent on the job. Despite the challenges, teachers also felt that DL brought them new perspectives and ideas about music education. The biggest difference between Finland and other European countries seems to be the fact that in Finland much more emphasis is put on making music together, band playing and choir singing. That is seen as talk of the delay caused by ICT in DL.
Keywords: *distance learning in music, COVID-19, Finnish music teaching*

Background

Since spring 2020, everyday life has been extraordinary throughout the world. In December 2019, a new coronavirus, COVID-19, began to spread in Wuhan, China. The viral epidemic quickly spread worldwide, and the World Health Organization declared

COVID-19 a pandemic on March 11, 2020 (Anttila, 2021; Pabst-Krueger & Ziegenmeyer, 2021; Casacchia, Cifone, Giusti, Fabiani, Gatto, Lancia, Cinque, Petrucci, Giannoni, Ippoliti, Frattaroli, Macchiarelli & Roncone, 2021). Due to the coronavirus, nations around the world had to adapt to this situation in order to deal with the crisis. Also in Finland, schools, universities, polytechnics, and other education institutions were ordered switching to distance education. On 16 March 2020, the Finnish Government held a briefing on the Contingency Act. Measures and the law entered into force on 18 March 2020. Only early education and pupils in grades 1 to 3 whose parents worked in areas critical to the functioning of society were allowed to attend in-person education (Opetus- ja kulttuuriministeriö, Sosiaali- ja terveysministeriö & Valtioneuvoston viestintäosasto, 2020). The official announcement of the transition gave schools little time to adjust. In practice, the schools had one day to arrange the transition to distance education, which presented a major challenge to the school staff. The situation required significant acclimation by teachers, pupils, and their parents.

In Finnish school, the art and skill subjects are based on bodily work, singing, playing musical instruments, and using collaborative activities. Transferring these qualities to distance education presented major challenges, and teachers were forced to use all their skills to create the same quality in learning the subjects via internet (distance) teaching (Bauer, 2014; Hankala-Vuorinen, Uksila, Vanhala, Salin & Haapakoski, 2020; Hodges, Moore, Lockee, Trust & Bond, 2020). In music, collaborative instrument-playing and singing form an integral part of lessons which are intended to create a strong communality within the group (Opetushallitus, 2014). Via a network, it is impossible to implement band playing, singing and music making in the same way as in a classroom situation, because of the delay between connections (Ruippo, 2009; Dorfman, 2013; Koutsoupidou, 2014; Brown, 2015). Pupils also rarely have home access to instruments used in music lessons, and music teachers were forced to come up with new, non-traditional ways of teaching music.

Distance Education

The term ‘distance education’ (below DL – distance learning) can describe several instructional situations. It has been around for well over a hundred years. Correspondence courses started in Europe were the first ways of DL staying as the primary means until the middle of 20th century. With advances in technology, letter instruction changed to teaching via radio (Imel, 1996), television (Moore & Lockee, 1998; Teaster & Blieszner, 1999), telephone, and other means of communication, leading to modern teaching by using computer networks (Lehtinen & Nummenmaa, 2012; Koehler, Mishra, Kereluik, Shin & Graham, 2014). In relation to the quality and versatility of teaching, distance education can also be organized because experts in a particular subject or field are not available at that institution and teaching can be arranged remotely (Lehtinen & Nummenmaa, 2012). Simonson and Schlosser (2006) also define distance education as an institution-based, general education organized by an institution to deviate from self-learning. Teaching can also be asynchronous, meaning that giving and receiving instruction take place at a different time, allowing the student to study at a time that works best for them. Use of interactive telecommunication tools means synchronous or asynchronous contact between teacher and pupils via telephone, television, or telecommunications networks. The teacher is in connection with the pupils and available resources, such as teaching

materials, enabling the teaching (Simonson & Schlosser, 2006; Mishra & Koehler, 2006; Simonson, Zvacek & Smaldino, 2019; Lai & Bower, 2019).

Keegan's (1986) definition of distance education strongly includes the pupil's independent status as a learner. Pupils can also be organized in group studying. DL systematicity, teaching material, and methods are structured and do not include individual tasks or methods; very creative or personal tasks cannot be involved (Muntean, 2017a, 2017b; Rumble, 2019).

Implementing Distance Learning

The most common solution in DL is the use of email, video notes and other means of communication. The versatile combination of different media types ensures the highest quality of distance education (Nagrale, 2013; Rieldling, 2020). The most popular applications in distance education are different learning platforms, email, and video conferencing hardware. Classroom teachers emphasize email and learning platforms for task sharing, but also video conferencing to get real-time contact with pupils (Nummenmaa, 2012; Vlasenko & Bozhok, 2014).

The structure of distance education depends on the type of group being taught. Overly interpretive tasks may be challenging for a less self-directed group, but highly defined mission statements and precise schedules may be too rigorous for learners preferring a free learning schedule (Shearer, Aldemir, Hitchcock, Resig, Diver & Kohler, 2020). Distance education for children should be well organized and more structured, the younger the pupils are, the more the teacher needs to worry about the active participation in teaching. Young pupils do not have skills of self-direction abilities and independent initiative; therefore, the teacher should control and direct the activities of pupils as well as in in-person classroom education (Lehtinen & Nummenmaa, 2012; Brown, 2017a, 2017b).

The diversity of pupils and the pupils' special needs should be considered in DL. Routines and clear instruction are important. Teaching should include real-time, two-way communication which can be reached using video calling. This allows pupils receiving the support they need to complete tasks (Sergejeff, 2020). Active interaction always produces better learning outcomes. Contact teaching cycles should be arranged increasing interaction between pupils and the teacher (Lehtinen & Nummenmaa, 2012). Pupils can also participate through videoconferencing, which allows the connection to the class to be maintained and the pupils to feel as part of the class-community (Hurme & Laamanen, 2014).

The pupil's motivation is important, and it has a direct connection to the activity of studying. Making independent decisions and using one's independent initiative are qualities which predict better learning outcomes (Lehtinen & Nummenmaa, 2012). The role of the teacher is important taking special care of pupils who have difficulties in self-referral or managing given tasks. This way they do not feel as if they are left alone with learning challenges (Zilka, Rahimi & Cohen, 2019).

Distance Education in Music

Distance education in music began in the 90s, so the phenomenon is not new. It is a growing field and several universities around the world offer music courses in a distance education format (Brändström, Wiklund & Lundström, 2012; Blake, 2018). Combining different forms of media improves the quality of teaching and helps to solve problems (Ruippo, 2009). Teaching materials can be distributed to pupils through a website, email, or teaching platform. Instruments for online education can be classified on media format. Text-based tools include e-mails, text messaging, chats, and various learning platforms and online communities. However, written communication is one-sided and in addition to the use of video technologies, it is practical to use real-time video conferencing in the instruction of playing or singing. Another method is using video-based tools, which include online recordings, webcasts, online meetings, and video conferencing. Video conferencing is as close to in-person classroom education situation as possible, and various video technologies are natural ways to implement DLIM (Ruippo, 2015; Nart, 2016; Pop, 2017).

A webcast is the transmission of audio, image, and text on data networks, either in real-time or viewed later. Webcasts include streamed videos, podcasts, or lecture recordings (Ruippo, 2009). In DLIM, the webcast can be utilized if pupils record their performance on video for the teacher to a later review (Koutsoupidou, 2014). Video conferencing and its two-way interaction between teachers and pupils have the smallest methodical changes compared to the in-person education. The delay caused by video conferencing makes music playing together in real time almost impossible (Tambouratzis, Perifanos, Voulgari, Askenfelt, Granqvist, Hansen, Orlarey, Fober & Letz, 2008; Ruippo, 2009; Scherer, Siddiq & Tondeur, 2019). Also, Koutsoupidou (2014), as well as King, Prior and Waddington-Jones (2019) mention that the most common challenges of DLIM are related to the lack of online connectivity that prevents simultaneous musical instrument playing.

The music teaching lays emphasis on auditory, functionality, and non-verbal interactions. In DLIM, the pupil's own activity is important, and the tasks should bring best learning experiences and processes (Salavuo, 2009; Blake, 2018). Because of its self-referential nature, DLIM is challenging for young pupils who need a lot of guidance. In music theory teaching, interactions in real time may not be required; as instruction is mostly based on reading educational material shared online (Koutsoupidou, 2014). At its best, online music learning is a student-driven, communal activity where participants learn from each other (Salavuo, 2009).

Distant Education Arrangements in Music in European Countries

In March 2021, the Network of Music Teacher Associations in Europe (MTAs) under the umbrella of the European Association of Music in Schools (EAS) published a joint publication *"Perspectives for music education in schools after the pandemic"*, which presented the solutions to problems of music education from different points of view in several European countries (Germany, Greece, Turkey, Slovakia, Portugal, Netherlands, Romania and Switzerland) during the COVID-19 pandemic distance learning time. The data was collected almost similarly, but the number varies from

20–200 teachers per country (Daubney & Fautley, 2020; ECDC, 2020; Green, 2020; Onyema, Eucheria, Obafemi, Sen, Atonye, Sharma & Alsayed, 2020).

The problems in DLIM were almost similar in every country: How to efficiently organize their music teaching respecting new coronavirus restrictions and following new technological demands? How to sing, how to play musical instruments or how to stimulate pupils' creativity from a distance, or behind a face mask? Or even more, how to teach behind a screen without losing the energy of teaching "live" and to realize, in such a limited context, musical interaction as a human communication? The book also presents answers to the questions: Which were the main challenges and how the teachers reacted to them?

In many European countries, teaching was first stopped totally, but in a couple of days or some weeks it was started again, however in a distant way. The teachers, who didn't contact their pupils for several days or even a week, felt 'irritated and blocked' in a psychological way. For example, some teachers in Germany, Greece and Turkey described feelings of stiffness, helplessness and despair (Kivi, Koniari, Özeke & Çeliktaş, 2021). There were problems in contacting the pupils because of lack of equipment at homes. Some teachers started sending tasks to pupils via email, letters, or telephone. The tasks contained listening to music, searching for information and reading texts sent to the pupils. After a while teachers started using Zoom, Skype, Google Meet, Webex, WhatsApp or e-learning platforms in contacting their pupils. The workload experienced was enormous, but the teachers also enjoyed learning new skills in ICT. The pupils made recordings of their own singing and instrument playing, music listening was one of the most common tasks for pupils, and teachers also made recordings of their own singing and music making. Teachers also tried to get the families involved in music lessons.

There were lots of technical troubles in countries like Slovakia (Medňanská & Strenáčiková, 2021) mainly because of the lack of technological background at schools and at home. Less than half of Slovakian teachers could teach online. The hours spent with pupils were between 2–4 a day concerning those teachers who were able to do it. Music was among the subjects, which were left for less attention as it was not seen as an important one. In Portugal the teacher's role was seen more as a facilitator than a supervisor, similarly to other European countries. The use of 'flipped' classroom was also taken into account in Portuguese music education. Face-to face teaching was seen as a fundamental way of teaching music (Encarnação, Vieira & Brunner, 2021), which cannot be replaced with DL only. It is interesting to note, that Portuguese music teachers focused on aural skills, reading, and writing skills, theory, but never mentioned problems with making music together, band playing or anything else of this kind (Encarnação, Vieira & Brunner, 2021).

According to the European Joint Research Center (European Commission, 2020), in 22 European countries more than 20 percent of children during the pandemic missed two vital educational resources of the following list: internet access; absence of a computer or tablet at home; a quiet place to study; reading opportunities; a key source of daily nutrition.

Distance Teaching Opportunities in Finland

Many teachers felt that their distance teaching had developed their digital competencies. Despite the challenges, the distance education also offered lot of positive experiences and some pupils liked distance education. For shy pupils, it opened more freedom and opportunities. Pupils' self-referential development was perceived as a positive effect. The development of computer skills was also cited as a positive influence of distance school (Sainio et al., 2020; Pabst-Krueger & Ziegenmeyer, 2021).

According to the survey by The Finnish Association for Teachers (Opetusalan ammattijärjestö, 2020), the majority (70%) of teachers felt that distance education was going well as a whole. Working mainly took place on an employer-provided computer and a dedicated home online connection. Work phones were available to 44% of teachers. The tools were at least partly new to many, so the transition to DL caused a rapid increase in the digital competences of many teachers. However, the predominantly existing digital and pedagogical competence was perceived to be sufficient for this situation.

All teachers believed that distance education developed their technical and pedagogical skills. They also saw that DL gave variety to work, providing pupils with a more diverse and flexible learning environment, and that it facilitated networking with other institutions and teachers. There were no gender differences, but young teachers were more positive about DL and felt it had a positive impact on their own computer skills, the development of pedagogical skills, and the variability of work (Teo, 2011; Nummenmaa, 2012).

Challenges of Distance Teaching

The biggest challenges in distance education were related to internet connections, lack of infrastructure, class management, and human resources. Internet access was often poor and not everyone had access to fast network connections because of their location (Adedoyn & Soyka, 2020; Sari & Nayir, 2020). In terms of class management, inconveniences occurred including communicating with pupils and monitoring their learning progress. Staff resources were not always sufficient to provide distance education and teachers and pupils did not know how to use distance education systems (Sari & Nayir, 2020).

Class teachers mostly think that distance education is not suitable for primary school and interaction skills should be taught face to face. Two-thirds of the teachers maintained that they had been in touch with all the pupils, although half of them had had trouble with getting some pupils to take an active part in lessons. Matters that made contact difficult included pupils' personal difficulties, home conditions and IT problems (Sainio et al., 2020). Problems were also with the pupils' attitude towards DL. They were not attuned to teaching with the same importance as in-person education and considered DL like a holiday, as school was attended from home (Sari & Nayir, 2020). Student contact was supported by the school's pupil maintenance team and other actors. Connecting with pupils' homes and agreeing on common policies also helped to engage the pupil. Communication with pupils was often perceived as positive. Especially for shy and quiet pupils, it was easier to establish a more personal

connection and the improved connection continued even after distance school. On the other hand, some teachers felt there was a greater lack of communication through remote access and the interaction was one-sided in their view (Sainio et al., 2020).

Multiple similar tasks were often assigned to all pupils, which made especially conscientious pupils or those with learning disabilities experience a heavy study load. Pupils with pre-existing self-referential difficulties had even more difficulties. The disadvantages of using information technology were associated with the lack of equipment and poor or missing equipment in pupils' homes (Sainio et al., 2020). In normal circumstances, pupils take advantage of school hardware and free online access, but these tools may not be available in the home setting. Studying in the home environment was also often interrupted by family members or pets (Adedoyin & Soykan, 2020).

According to The Finnish Association for Teachers (Opetusalan ammattijärjestön, 2020), one of the major adverse effects of exemption arrangements was the teachers' lassitude because of the increased workload (Ahtiainen et al., 2020). The vast majority experienced a large increase in workload during the distance education. It was perceived as a result of enlarged teaching preparatory work, increased communication with homes, the provision of personal feedback to pupils, and the introduction of new tools. In primary education, real-time instruction was only partially given and most of teaching was based on tasks given on a daily or subject basis. Verification and feedback on these tasks were perceived as a heavy workload (Opetusalan ammattijärjestö, 2020). DL was also stressful because the existing plans for in-person classroom teaching had to be changed to suit teaching online. Time and hard work were needed also in learning and deploying devices and applications before teaching could run smoothly (Adedoyin & Soykan, 2020). The teachers' exhaustion was found compounded by a low appreciation of their work. Music teachers had experiences of low esteem in music, as other subjects were considered more important, and schools invested more resources in the DL of these. Further, teachers did not receive the necessary support to manage well in their jobs (Shaw & Mayo, 2021).

The Content of Music Education in Grades 3 to 6 in Finnish School

The Finnish basic education curriculum defines four content areas for the music in grades 3 to 6. They are:

- S1. How do you work in music? This places emphasis on the student's activities as a member of the music making group. Singing, playing and moving are practiced through common music playing and the focus on teaching is the development of expression skills and imagining ability.
- S2. Where is music formed? This area encompasses learning and perceiving basic concepts of music in the context of music making and playing. As the skills develop, established or one's own symbols are also used from the concepts to describe those phenomena. Also, attention is paid to interpretation and expressive means in music making and playing.

- S3. Content area "Music in your own life, community and society" deals with experiences and observations generated by music in relation to different environments of music. The connection of music is also built with other subjects and its importance in communities and life situations is strengthened.
- S4. This area deals with the program and repertoire of songs used in teaching. It consists of a variety of music with particular attention to the pupils' own cultures and their education. The repertoire also includes music created by the pupils themselves (Opetushallitus, 2014).

Content of the music curriculum compared to the ways of working in distance education causes challenges and opportunities. In the first content area of the curriculum the emphasis is on common music playing. DL gives little scope for the implementation of joint music making and instrument playing (Koutsoupidou, 2014; Ruippo, 2015; King et al., 2018). Instead, the basic concepts of music, music culture or diverse repertoire can be studied well through remote connections. Music can be listened to online and at the same time pupils can be introduced to its structure, history or meanings in one's life. Although theory-oriented content areas of music can be taught by means of DL, they are slightly lacking in the dimension of communal learning.

Learning Environments

The Finnish Basic Education Curriculum on Learning Environments mentions that information and communication technology (ICT) is an integral part of diverse learning environments. In music teaching ICT should be utilized in educational situations. Offerings organized by collaborators like cultural institutions should be incorporated into diverse learning environments (Opetushallitus, 2014). DL itself is an activity in an online environment, where the use of ICT in the context of music education inevitably takes place. Taking advantage of cultural skills in teaching, such as following different musical performances online, can also be a natural way to organize a diverse exploration of music culture during DL.

According to Myllykoski (2009), non-formal learning should also be considered concerning music. A lot of learning takes place in other contexts than appropriate institution-based study of music. Music can be learned in a variety of environments, such as leisure time with friends or through computer networks. Informal learning, too, is often combined with experiential, exploratory, and problem-oriented learning. Versatile studying of music by utilizing different learning environments can therefore occur through informal learning. From a DL perspective, music studies can take advantage of the opportunities offered by the online environment and musical activities with the family as a part of music education. In this way, studying music does not have to take place only in classrooms, but the educational content of music can be absorbed to a great extent in everyday activities.

The mission of learning environments is to provide a diverse set of studies that create opportunities for musical collaboration in which all pupils can participate (Board of Education, 2014). However, in an online environment, to organize musical co-operation is challenging, and in this case the learning environment has been planned to be placed in an in-person educational situation. One obstacle to musical co-

operation is also the fact that the interaction between classmates becomes more difficult when it does not occur in a close contact. For example, Nummenmaa (2012) sees that interaction between pupils has been perceived as one of the most challenging factors during DL.

The Changed Working Basis in Music Teaching

The essential way of working in Finnish music classes is to play and create music together. The emphasis should be on interaction situations, common music playing and other musical collaborations creating a diverse, flexible set of teaching in which the above characteristics would be accessible to all pupils (Opetushallitus, 2014). Also, playing together and forming a community is the most preferable way to study music, and this makes music a very special and eccentric subject (Lindström, 2011). Lindström (2011) sees music lessons mostly as common music playing, through which individual playing, singing, and music performance skills are practiced together. Also, music theory can be studied during the activities of joint music making and playing.

The atmosphere of music lessons should be encouraging creativity and emphasizing the joy of learning. The pupil's musical skills develop through positive musical experiences and related experiences (Opetushallitus, 2014). Teaching should support pupils' enthusiasm and place emphasis on motivating subjects and working patterns. Pupils' motivation is influenced by their sense of self-efficacy, which is why music studies should support activities that the pupils can cope with. When music is studied considering the interests of pupils and supporting their self-efficacy, it predicts better motivation. From a motivation point of view, learning should also focus on active work of pupils carried out in a group, for example, joint playing and music making (Sanz & Orbea, 2014). Feedback from the teacher helps motivate the pupil, if it is honest, supportive and encouraging (Jaatinen, Laitinen, Laurila, Pihlus, Reini & Varis, 2013).

One of the most significant challenges in distance music teaching is the fact that to play music simultaneously through remote connections is difficult (Ruippo, 2009; Koutsoupidou, 2014; King et al., 2019). Important accompanying and joint playing skills remain undeveloped when the teaching is carried out remotely (King et al., 2019). When there is a whole class of pupils to be taught, the challenges of joint playing will significantly increase. If teaching traditionally is based on joint playing, the transition of music instruction in DL deprives it of an important way of working, while eliminating the common learning characteristic of music.

Music playing is also challenging at an individual level in DL. Teacher and pupil also miss out on playing position or technique aspects which are easier to detect in in-person education. Another challenge is the interaction between teacher and pupils. DL in music requires self-referential skills which young pupils may not have developed yet. Pupils do not actively ask for directions or participate in a common conversation, which makes it important to ensure communication between all pupils and create a positive atmosphere (Koutsoupidou, 2014). In DL, the pupil acts alone, and the teacher cannot immediately notice if there are difficulties, and many challenges and problems may be unnoticed unless there is an active contact with the student. Some pupils have also had trouble in committing to distance education. They have been

reported to opt out of remote lessons and teachers have reported 'missing pupils' with whom contact has been particularly challenging. If pupils generally struggle with DL, subjects such as music may receive little attention, especially if they are perceived as less important compared to the core subjects (Shaw & Mayo, 2021).

The Aim and Questions of Research

The purpose of this study is to elucidate teachers' experiences of DLIM in grades 3 to 6. The research was carried out in the spring of 2020 under the conditions of distance education due to the COVID-19 virus situation (Opetusalan ammattijärjestön, 2020). In addition to experiences, we also map the means which teachers implemented in transitioning to distance education in music teaching.

Technological competence is perceived as one of the skills of the future and the use of technologies in different contexts will become more common in the future (Stauffer, 2020). The teachers' experiences discussed in this research may also provide evidence for how ICT would be most inherent in linking music to teaching. On the other hand, one can identify those aspects of music teaching that are good to keep within the realm of in-person education. While DLIM certainly posed challenges to teaching, it is also interesting to see whether DL is helpful in music teaching in some ways, or if the teachers felt that it had offered something new for teaching.

Our research explores two research questions:

- *What kind of experiences do teachers have while teaching music in a distance learning context?*
- *How have teachers carried out distance teaching in music?*

The Research Method

This research has been conducted as a qualitative study and is focused on exploring experiences of DLIM. The study of experiences belongs to the phenomenological research tradition (Huhtinen & Tuominen, 2020). Central to the phenomenological research is to consider human perception, and the study excerpt focuses specifically on the study of the experience, meanings and community of the subject. The human world of living and its structures are the subject of interest in phenomenological research (Miettinen, Pulkkinen & Taipale, 2010; Laine, 2010; Tökkäri, 2018; Huhtinen & Tuominen, 2020). Since the purpose of this research is to uncover experiences DLIM, it makes sense to examine individuals who have extensive experience in the matter. Of course, the experiences of each teacher are unique but the challenging situation they all faced revealed also similarities among teachers.

The Data Collection

The data for this research was collected by interviewing nine (n = 9) classroom teachers or music subject teachers who taught music in grades 3 to 6 of primary school and all had experience in music distance teaching from March to May in spring 2020. The interviewees are from the regions of northern Karelia and northern Savona.

Data collection took place between November and December 2020 through TEAMS video meetings, and the meetings were recorded for the later analysis.

The interviews allow the researchers to see the interviewees' viewpoints and their meanings. The person interviewed in the study is seen as an active player and subject in a familiar situation (Hirsjärvi & Hurme, 2015). Laine (2010) describes the interview as the most pervasive means of approaching the human experience world in phenomenological research. A thematic interview allows the interviewees to reveal their experiences and their meanings around the theme under discussion, and precise questions do not limit their chances of answering them (Eskola & Vastamäki, 2015; Hirsjärvi & Hurme, 2015). In a semi-structured interview, all interviewees are asked the same questions in the same order, but the interviewee can answer them in their own words. The interviewer may also change the order or wording of questions (Eskola & Vastamäki, 2015; Hirsjärvi & Hurme, 2015).

We chose two main themes for the interview: through which media the DLIM has been implemented and what kind of experiences the teachers have gained in DLIM. Interview questions were submitted to interviewees before the interview, allowing them to look back in advance on their experiences from the distance learning time.

The first major theme, namely by what means the teacher implemented DLIM, was a more clearly structured part of the interview. The purpose was specifically to map how teachers responded to educational challenges and what experiences they had on the pedagogical side of distance education. The questions were selected carefully so that the interviewee could answer the thematic questions as variously as possible. Moreover, these subject areas particularly interested us from the perspective of the implementation of distance education. In the interview situation, however, the interviewees were allowed to answer questions as widely as they wished and the conversation between the teacher and the interviewee was open, as well as moving across different questions at times.

The second theme, the experiences the teacher gained from DLIM, was more open. This theme delved deeper into the experience of the challenges as well as the impact of distance education on one's teaching. At the end of the interview, each interviewee was offered an opportunity for free word. With this we offered the interviewees an opportunity to share experiences that were not necessarily related to pre-presented interview questions. The interviews were kept conversational, so that additional questions specific to the situation could be added to avoid brief or superficial answers.

The Data Analysis

The interview material was analysed using a data-driven content analysis. The phenomenological examination excerpt involves setting aside the theoretical reference framework for the duration of the analysis of the material so as not to confuse the interpretation of the subjects' own experiences. No theories or models related to earlier research are used as a basis for the analysis of the data. Instead, the theoretical frame of reference is only returned after the analysis, in which case the results are reflected on previously studied knowledge (Laine, 2010).

Before the analysis, the interview material was transcribed, and each interview was named by numbering the interviewee, for example, Teacher 1, Teacher 2, and so on. Tuomi & Sarajärvi (2002) describe dataset content analysis as a three-step process: reducing, clustering and abstraction. After these, a classification can be completed (Tuomi & Sarajärvi, 2002; Moilanen & Räihä, 2010).

Results

The first major theme, the implementation of distance education in music, presents pedagogical and substantive solutions for music teaching used by teachers. This chapter first discusses the teaching equipment, the content of teaching and the working methods used and, secondly, we discuss the experiences of motivating, activating, and evaluating pupils during the distance teaching period.

The other main theme, experiences in music distance education, presents the challenges experienced by teachers, their solutions and observations, and the lasting effects of the distance teaching period on their own teaching.

A. Teaching equipment

The teaching media used were mostly computer-based. A wide range of different devices and applications were used, with both communication via video connection and various online platforms where teachers could send tasks to pupils. The Microsoft Teams application was mostly used for video calling, but Google Meet and Zoom were also mentioned as video calling apps.

> *"[…] This communication was, of course, in Google Meet and then Teams to some extent".* (Teacher 1)

> *"Microsoft Teams was very, very weak; it doesn't suit music teaching at all. And Zoom was banned, you didn't get It […] yeah it had some problems with security issues, so its use wasn't allowed".* (Teacher 3)

Several teachers would have preferred using Zoom for video conferences, but the institution had banned its use because of security issues. Despite being widely used, Microsoft Teams was perceived as a weak communication tool from a quality standpoint. Various teaching platforms also appeared in great numbers. For example, assignments were distributed through Wilma (a network connecting the teacher, parents and the pupils together commonly in use in all Finnish schools), allowing the teacher to see if the pupil had visited the assignment link. Many teachers also mentioned using the WhatsApp app as a task recovery platform.

> *"I posted assignments through Wilma […] those links were in Wilma, that way I was able to follow who had visited the links".* (Teacher 2)

> *"[…] I got videos on WhatsApp messages, and then via Qrid".* (Teacher 3)

Teaching tools were mainly IT focused, but some of the teachers mentioned that they also used musical instruments in teaching. Some accompanied pupils on the piano, but there were also mentions of the pupils themselves making instruments for educational use.

> *"[…] the instruments in your own home in addition to different instruments such as guitar and piano, as well as any other combination of band instruments".* (Teacher 1)

> *"Then there was spoon-playing, bucket-drumming. Further, during Easter vacation, they built their own rhythm eggs, and they were played".* (Teacher 5)

Instrument playing took place independently at home and teachers mentioned that either self-built musical instruments were used for playing, or those instruments that happened to be found at home.

B. The content of teaching

Since there were difficulties in organizing joint playing, teachers chose theory-oriented topics such as rhythmics, music theory, music knowledge, and music history as content areas. Rhythmics was one content area commonly used as it made the tasks functional. The issue included various body rhythm exercises and learning drum rhythms, among other things.

> *"[…] A man on YouTube had made some kind of body-percussion material, then I repeated that; there was an educational video of it […]"* (Teacher 2)

> *"[…] and then maybe rhythmics was more emphasized in more functional tasks".* (Teacher 4)

Another common area was music history and music knowledge. For example, a lot of ready-made materials were found about music history and teachers felt this made it easier to organize teaching.

> *"[…] this was the most difficult thing to do… luckily I found a good package on the history of music, and I built two months of teaching based on it […]"* (Teacher 7)

In addition to history, the respondents mentioned exploring the symphony orchestra and film music. In music history and music knowledge, theoretical significance of the content was perceived as an appropriate and easy way to implement DLIM. At studying history and music knowledge, listening was often used. Some teachers felt that listening to music was focused on more than would have been usual during in-person education.

> *"Then the listening was emphasized more. We clearly listened to music with the pupils more than in in-person education. And, then it was developed so that it is not just listening, but discussion about it, so that I extended the listening […]. Body rhythmic stuff or a little bit of it based on studying music or including instruments to it".* (Teacher 6)

Listening to music could be combined with the most of the content, and it was possible to implement it by a remote access. It enabled pupils to explore different periods of music or to familiarize themselves with different musical tastes. Singing and playing time during the distance teaching period was shorter than the pre-distance teaching norm. Lag problems with video connections were perceived, as well as the challenging

availability of musical instruments for the players. The teacher could not be sure whether the pupils sang or played their instrument at home as requested.

> *"[…] they are so stressed in class, just singing and playing. Then the assignments were difficult to implement, so that if you would give someone a singing task, there was no way of knowing what was actually going to be done. And then the pupils didn't have any instruments at home, so everything was pretty impossible to execute in a way that there would be some sense of what was actually accomplished […]"* (Teacher 4)

Despite the challenges, some teachers brought singing and playing into music lessons in DL as well. Music making and playing together was replaced by alternately singing and recording or videotaping the music playing.

> *"Singing a song solo and then an echo, like I would first sing and then the pupils would repeat that on Teams. It was just a bit problematic when we had little delay problems (laughter) […] so then there were connection problems anyway, so it was a bit awkward. But pupils were singing karaoke, I mean at home, and then if you can count the beatbox as singing, there was a few beatbox hours included".* (Teacher 6)

Judging by the responses of the teachers, playing had been done most frequently in some ways, but the mentions of singing were fewer. Instrument playing was always carried out on an individual level as there was no chance of joint playing through remote connections.

C. Methods of working in music teaching

Listening was one of the most common ways of working in DLIM. For example, the teacher could provide pupils with links to music tracks and listening was controlled by tasks based on it. Listening to music enabled the teacher to share information with the pupils on various matters related to general music knowledge, theory, and history, so that the student actively acquired knowledge through listening.

Task types were largely written assignments. Teachers distributed tasks electronically and pupils returned them either through an e-learning environment or via a cell phone. Written instructive statements included, among other things, links to musical samples, instructional videos, PowerPoint presentations, or informational texts on the basis of which questions on the subject had been created for pupils. Returning tasks also enabled teachers to assess whether the pupils were familiar with the material. In addition to written texts, it was common for the pupils in some ways to record their outputs and send them to the teacher either as a video, or as an audio file.

> *"I had music notes stuff in there, for example I told the pupil: "Play this song and send it as a video to me". And then they sent me a video, and they liked it very much, so there was a lot of this kind of interaction. Some video clips were especially delightful, and it was wonderful to look, listen, comment and have a conversation with pupils about their work".* (Teacher 3)

Using videotaping, the pupil was encouraged to play music independently at home. Video and audio recordings included both singing and instrument playing, and pupils

could play using self-constructed instruments, body rhythms, or various music applications.

Teachers' experiences showed that by videotaping their playing or singing, pupils were able to express themselves better than they could do it in in-person education. It was easier to show one's competence when the musical sample could be done independently in a relaxed atmosphere at home and only the teacher could hear it. Consequently, many shy pupils were able to show their competencies better. In addition to written assignments and returned tasks, some of the teachers also held so-called 'live lessons' where the teacher and pupils could meet face-to-face via videoconference in real time.

Teaching lessons held via video connection required the teacher's leadership due to internet lag problems, and the activity was often of a type that the teacher demonstrated a model to the pupils, and they acted independently at home. A joint singing was possible in such a way that the teacher would sing and accompany the songs, and the pupils would sing with the microphones turned off. However, most teachers interviewed found the lessons held via video connection challenging and instead of live hours many placed more emphasis on written assignments.

D. Motivating pupils

At the implementation of DLIM, it was also important to keep tasks and studying as motivating as possible. One means of motivation was to give tasks that pupils would automatically get excited about. Knowing pupils well helped in this, and tasks were shaped in terms of the teaching group involved.

> *"[…] I tried to start with things that are already familiar to them, and of course, because having taught them for many years now, I had some idea about what would be of interest to them".* (Teacher 6)

In addition to tasks being inspiring, teachers felt also that these tasks must not be too challenging. If the pupil immediately perceives the task as ambiguous or very difficult to implement, motivation is often lost right at the very beginning.

> *"In many cases, if I had to do it again, I would simplify it, and I would make the instructions simpler and I would split up the tasks over weeks or days. I was somehow surprised by the fact that the pupils can't do the tasks. For example, if the task had five issues, it was too much for some pupils to understand what should be done. This is connected to motivation: if they don't understand what to do, they will immediately stop trying".* (Teacher 1)

Many teachers felt that DL was already challenging and burdensome for pupils, so they tried to keep music as light and fun as possible. In this way, they generated the necessary motivation for studying. Positive feedback and communication with pupils were also perceived important for motivation. Communication with the teacher served solely as a motivating factor when the pupils felt that they and their efforts were noticed.

> *"[…] always remember to give positive feedback, and it doesn't need to be so accurate or structured. The main thing is that you notice everyone's efforts so that the pupils feel their work is relevant. And maybe enough motivation*

> *is that given tasks always were gone through and they were talked about. After that we went ahead, and it was enough to motivate most of the pupils".* (Teacher 7)

Positive feedback and discussion of solutions helped the pupils advance in their assignments. Many teachers also wanted to underline that trying is enough, and studying music is not that serious.

> *"The biggest danger in distance learning was that someone would totally drop out. Maintaining motivation had to be remembered all the time. To some pupils I said, 'Hey, here you could try a little more because just that particular point did not work well, but so what! This is all just training'. Everything had to be taken care of as positively as possible".* (Teacher 3)

However, motivation challenges were sometimes perceived especially among senior pupils. Occasionally, external motivation was also a means to ensure that the pupils do the tasks within an agreed time frame. A certain time limit could be set for submitting works, or the pupils could be told that the time the works were submitted as well as quality of fulfilled assignments would affect the student's grade in music.

E. Maintaining pupils' activity

In addition to motivating pupils to keep the DLIM running smooth, it became necessary to make sure that pupils were also actively involved in teaching. In the classroom, the teacher can clearly see which pupils are present and how they participate in learning. In DL, the pupils' activities take place independently at home, so the teacher must, by various means, see to it that the pupil remains involved in learning. The simplest way to monitor student's activity was to see to it that the tasks were returned.

> *"I was looking at the outputs and checking whether the pupils are present at the distant connection. The Qrid is good because you can see right away if the child is present or not, and I can see from the assignments they have submitted whether they were done with a thought or how excited and motivated the pupil has been".* (Teacher 3)

During the DL period, some teachers kept a list of each pupil's returned tasks. Thus, they were able to observe the activity of pupils. However, the pupils often failed to return assignments on time, and therefore they had to be reminded of the missing assignments and had to do them afterwards.

Other teachers kept a tight grip on every given assignment coming back to the teacher. On the other hand, for some teachers asking for tasks to be returned was impossible in time, and all the tasks could not be checked to be returned. Yet, as well as possible, every teacher strived to ensure that the given tasks were completed. Occasionally, pupils had to be encouraged and stimulated on a personal level and many teachers mentioned contacting the pupil if they seemed to be dropping out of lessons.

> *"[…] if there was a situation where I had someone who had done the assignments extremely poorly and I saw that the pupil was depressed, being out there alone, then I just picked up a cell phone and called. And we chatted and checked all kinds of matters and issues. I know that young people need a*

> *lot of contact, and the challenge was with those young people who were pretty much alone without an adult for days. I called them in the morning, and I woke them up, said good morning, let's go to breakfast and so on… that's the kind of calls I made".* (Teacher 3)

Teachers' responses showed that pupils whose level of activity had been low during in-person education needed also more help in doing their tasks during distance education. For the student not to drop out or fail classes, the pupil had to be in a direct contact with the teacher, since in this way the teacher was able to help the pupil cope with tasks and schoolwork. Teachers also cared about their pupils, and they tried to keep pupils involved in teaching by all possible means. Real-time communication with the entire class was also one way of keeping pupils active. Many teachers held a video meeting at least once a day, when they recalled the issues of the day and offered help with learning tasks.

> *"At the beginning of the hour, we checked the whole crew, and made sure everybody was present, and the instructions were readable in the morning, meaning that there was immediately an opportunity to ask if anyone had questions".* (Teacher 7)

Through live classes, the teacher was able to directly see which of the pupils were present, as well as monitor by a video call how pupils were participating in the lesson.

F. Teaching assessment

In the DL period, evaluation was not perceived as important as during the normal school year. Many teachers lowered the bar, so to speak, and they saw it as good enough if the pupils participated in lessons at all. Teachers also saw that there was enough of evaluation material accumulated over the school year earlier, and thus, it would not be necessary to take the distance teaching period into consideration at making a full-year assessment.

> *"But let's say that the assessment was at the time we were, at the end of March, so that the assessment was already done. But then there were those, who sort of went up, bounced in a positive way. Yet [this] confirmed [the fact] or caused surprise in a way, but that episode doesn't seem to affect that year's assessment so much any longer, quite frankly".* (Teacher 8)

The assessment was taken into account, if pupils showed a better competence than they did during in-person education. As mentioned earlier, some of the pupils succeeded better during the distance teaching period, and the teachers took this into account at evaluating their work. However, the teachers did task-specific assessment during the distance teaching period, and they assessed, among other things, the quality of the returned assignments and the activity during studying.

> *"[…] then in Qrid while chatting, when evaluating the output, I gave very much different feedback. I said that it really worked nicely while you played that rhythm with the drums… or lovely that you were impressed with Debussy during the classic music period. I wrote a lot of these kinds of messages to pupils. Very positive tones, so that no one would drop out".* (Teacher 3)

Returned tasks were commented on and pupils were given feedback about how well they had succeeded in doing the task. Feedback had to be positive in order to maintain their motivation to work. Some teachers also administered the tests remotely, but their grades did not make much impact on the assessment of the entire school year. One of evaluation methods was pupils' self-assessment. Self-assessment was used to map, among other things, what the pupils had learned and experienced.

> *"[…] so we had pupils do self-assessments many times during that spring; the pupils evaluated their own work. I had a Forms form that I always updated a little bit for the next evaluation and provided details there, highlighting more relevant subjects and leaving out topics which had already been included in earlier evaluations".* (Teacher 7)

Some of the teachers mentioned that there was more self-assessment than normally. By using the self-assessment, teachers also obtained an insight about pupils' perspectives on how the distance teaching period in music had passed.

G. Experiences of music distance learning

One of the challenges of DLIM was the use of time. Several teachers said that the DL required more time, and they did not seem to have enough time to do the job. In addition to planning the teaching, much time was spent on preparing and reviewing materials, and helping and supporting pupils with tasks. In in-person education, the teacher can simultaneously teach the entire class and provide feedback to the whole group. In distance education, messages came to each pupil one by one, and the necessary feedback or explanation of instructions could not always happen for everyone at once. In addition, teachers' working time and family life could overlap while working at home. Finding peace to do one's own work was even more challenging.

> *"[…] there was no chance of doing it based on a schedule or timetable. Finding time for work was challenging, not to mention that you would have time to plan it in some way with a long formula, because we did not know when this distance teaching would stop. I also struggled to find time for inspecting student tasks".* (Teacher 1)

A big part of working time went to inspecting returned assignments. Each pupil's outputs were to be inspected and commented on one by one, thus taking a significant amount of time. Compared to teaching in the classroom, checking assignments greatly increased teachers' workloads. Teachers' working hours also were extended significantly. Pupils returned tasks at different times and often completed them late in the evening. Teachers mentioned that their phone beeped from dawn to dusk as pupils returned tasks or asked for advice on how to do them. It was therefore often impossible to limit working to normal working hours.

Another major challenge in DLIM was the lack of a prepared educational material. Teachers spent plenty of time to find and prepare suitable material for teaching. In classroom work, it is easy to ask pupils to play and sing, but in DL each task had to be instructed in writing, and the teacher had to search for the appropriate text, video, audio, or footage.

> *"It took pretty much time for me to browse through the web, trying to look for meaningful tasks. Yes, they can be found reasonably well, but there was quite a lot of time wasted on that browsing and searching too. It would have been great if there would have been a good, already finished package [of tasks] that could be found with a little bit of a search".* (Teacher 4)

Teachers found that a prepared teaching material was challenging, but further challenges had to be faced at developing one's own materials. For example, making instructional videos was a new thing to most teachers, and it required knowledge of the technologies needed. Teaching should also be different at instructing pupils studying in in-person education and pupils studying in a distance education setting, since the task types are not similar.

The sudden switch to a distance education did not leave time for teachers to plan distance education in the long run. Quickly prepared classes and teaching sets caused concern among teachers who questioned the quality of their teaching materials. The challenge was to prepare high-quality tasks that would be motivational for pupils to carry out, while also serving the goals of music teaching. Some teachers also felt pressure concerning whether pupils' parents were satisfied with the quality of teaching.

Creating high-quality educational content was perceived challenging and clear, but motivational tasks required a lot of time and reflection from teachers. There was also pressure to compare their own teaching content with that of other teachers. During DL, a lot of ideas and their implementation were shared on social media to support distance education in music, but some teachers felt pressure at performing their own work. Music teaching is largely built on common music making and playing in the classroom. In DL, playing together was pretty much impossible, so the challenge was to organize playing and singing in remote conditions.

> *"So, the most challenging aspect was actual music making and playing. It's not possible to do this together in any video meeting because of the delay. It had to be done in pairs, for example training the body rhythms and recording it with a camera. It was impossible to create something in the same way as in a classroom situation".* (Teacher 7)

Due to the delay in remote access, common singing or playing so that everyone could hear each other was impossible to arrange. Teachers had to challenge themselves so that they could organize at least some kind of playing and making music during music classes. The pupils, in principle, had no musical instruments at home, which also posed considerable challenges with providing the opportunity of making and playing music together.

The teachers perceived it as challenging to keep contact with all pupils. Based on assignment returns and participation in video meetings, the teacher was able to see which pupils were working hard. However, there were also pupils who fell behind in lessons or did not easily understand assignments or their instructions.

> *"[…] a lot of things didn't work in any way during the period of distance learning, however, and it was very difficult to help everyone personally and individually. If you saw that some pupil did not catch or understand some*

> *tasks after one or two explanations by the teacher, then it almost had to be abandoned. This kind of personal support at that point was missing".* (Teacher 4)

Teachers experienced that the pupils longed for having more of in-person contact, and in in-person education it would have been easier to guide and encourage them. It was challenging to get in touch with an unmotivated pupil, and teachers had to personally call some of the pupils, if they did not participate in the distance lessons.

In addition to the challenges of teaching, teachers explained the challenging working conditions that distance education had posed. One of the challenges was poor internet connections and the delay or stuttering in video meetings. The necessity of computing was also challenging in some cases: not all pupils had their own computer at home, or not all had the necessary applications to follow teaching. The rapid transition to distance education and the change in the whole nature of music as a school subject, moving from playing and making music in close contact to the online education, took much of teachers' time. They had to study how music instruction could be remotely organized at all. Some teachers experienced teaching as fragmented and confusing, posing additional challenges and stress to work. For most teachers, teaching also took place at home, so finding a suitable working space and working time was not straightforward. In the home environment, challenges could be presented by, for example, a family's everyday life and matching it to the workday.

H. Teachers' solutions to music distance learning challenges

The challenges of distance education in music were reported to be related to providing quality and motivational instruction, as well as producing suitable materials. Teachers faced challenges associated with these situations by arranging teaching so that it would be as meaningful as possible for both teachers and pupils. During the remote period, teachers found that reviewing the tasks takes unusually much time and overly large task packages also put a strain on pupils. Many teachers said they reduced the workload of pupils during the distance education period and lowered the bar so that everyone could cope with tasks.

> *"[…] and in the same way I wished that music would not be an extra pain in addition to every other school subject pushing the learning of as much material as possible".* (Teacher 7)

The goal was to make music teaching as cheerful and light as possible, in order to maintain the pupils' motivation and not give pupils an unreasonable workload. Some teachers also felt that although music is an important subject, it is perhaps easier to lower expectations in terms of goals and tasks compared to other core school subjects. Another factor that presented challenges was focusing on issues important to wellbeing. In the beginning, teachers experienced pressure to provide instruction of adequate quality. These pressures were relieved by giving oneself more flexibility and mercy.

> *"[…] but I had to stop and be merciful to myself so that if something was done a little bit poorly, I wouldn't judge myself too harshly […] And also, in terms of tasks and returned assignments, not too strict a line needed to be drawn".* (Teacher 8)

DL was a new and challenging situation for everyone, so it was important to understand that it is enough to do one's best. Pointless critical self-evaluation was just a factor doing harm to work. It was important to be able to limit one's own working hours more tightly. Working days running around the clock exhausted teachers little by little and there was a need to draw boundaries for their own work at some point.

> *"I limited it pretty tightly to the point where I would not start again in the evening answering student questions. We had a WhatsApp group, so I went quiet, at five o'clock, or I made it stop. So, the schoolwork needed to be done before that time".* (Teacher 7)

The limitation of working hours was a significant issue for the distance education period. At the same time, it was a signal to pupils that they should do their schoolwork within a reasonable time, and the teacher does not need to answer pupils' questions at any time of the day. One important factor for wellbeing at work was the support they received from colleagues and the teacher community. In challenging times, teachers were able to ask for help from others, and they together planned how to do teaching better.

> *"You know, while you're still in the distance learning, you have access to a variety of Facebook groups like Elementary treasure troves and other initial teaching groups and the sense of community they form is just mind-boggling. You've got all the tips and the groups freely shared their own materials and it was something quite inconceivable, you know, we, teachers, are a rather impressive group".* (Teacher 2)

Challenges with educational material were often solved by consulting other teachers or looking at social media communities for tips. There was also a fine sense of togetherness among the teachers during DL period, and they shared their ideas with their colleagues with a fair hand.

The problem of establishing contact with pupils was solved by an active use of contact media. Teachers made certain that pupils had done the given jobs and, if there was anything missing, teachers would contact them. The interaction with the pupils was active, and the teachers called up pupils and communicated with them very often. Communication was not restricted to simply giving assignments and receiving feedback, but it was more general and some direct discussion with the pupils was held.

> *"[…] I called on the phone if somebody was not responding to other communications. I called the pupil and asked, "Hey did you do this?"* (Teacher 2)

Instructions and feedback to pupils had to be positive. By encouraging and motivating pupils to try, the teacher was able to activate pupils more effectively throughout a task.

I. Special features of music distance education

In DLIM, some teachers were confronted with the problem of checking pupils' comprehension. In DL, the teacher does not directly see if the pupils have understood the task and whether they can do it independently. Therefore, there had to be a special

level of contact with the pupils to ensure that the task was well understood. In the classroom, the teacher was able to immediately see whether the pupil was actively participating or was experiencing challenges with the task. In DL other means must be used to stimulate pupils' activity and develop their understanding. It was necessary to keep accurate records of returned tasks and output. If assignments were not returned, the teacher contacted the pupil directly and verified whether the pupil had forgotten to fulfil the task or more help was needed to complete it. Teachers' comments showed that following the returned tasks was almost the only way to keep pupils involved in learning. During the distance teaching period, teaching was largely based on sharing educational materials and tasks in an online environment. The teachers' experience showed that a special attention should be paid to the clarity of the guidelines.

> *"[…] it was such that you had to keep giving clear instructions when the kids are by themselves at home. So, it was a shock to understand that the instructions should not be so abundant or long; long explanations should be avoided. It has to be very clear, simple instruction".* (Teacher 3)

The teachers found that the instructions on the fulfilment of the task had to be really clear and succinct. If the instructions had too many steps and too much text, it was challenging for the pupil to keep up with what to do in the task. In order to maintain study motivation, tasks could not be too monotonous. Many teachers mentioned that varied tasks made it easier to motivate pupils. In addition to being mere literary outputs, the tasks had to be functional, and the perceptual material should allow the use of images, videos, audio and other similar media. Teachers also mentioned that tasks need to be differentiated so that pupils at different levels can do it.

In DL, the lessons had to be planned with extra-special care and teachers had to try to develop a clear set of instructions for tasks. The urgent start of the distance teaching period did not leave teachers much time for planning, so the plans progressed day by day in between lessons. However, it was evident that the teaching design was considered to play an important role for the success of teaching. Designing a clear set of teaching is also relevant for individual lessons. The next lesson is easier to plan when the instruction is followed by a clear idea. Learning is also more meaningful if teaching is built on a clear plan and does not include splinter shots from here and there.

DL workloads easily became heavy for both teachers and pupils. Therefore, teachers felt it was important to keep learning the subject of music as light as possible. Music was desired to be an empowering and fun subject which would lighten pupils' workload rather than add to it.

> *"[…] so I reached for it, with the aim of making music fun, light and interesting like a little snack among other, perhaps drier subjects".* (Teacher 4)

Teachers felt that challenging situations in music teaching should be avoided, because cheerful functional tasks would be a good counterweight to assignments on theoretical subjects. Keeping live hours was also seen as a good alternative to designing each music class so that the pupils would prepare some assigned literary task. Pupils would instead be able to attend music class via a video call, and no extra work would need to be returned later.

J. Positive effects of distance learning in music

As a result of the distance teaching period, teachers felt a deep appreciation of their own work. Exceptional conditions emphasized what a class-room teaching really was and what had to be left out when teaching was done through the screen.

> *"I learned to appreciate and understand even more deeply what happens in the classroom. It's so much more than doing a simple task… someone showing competence virtually…In music teaching, interaction is the most important thing".* (Teacher 1)

During distance education, collaborative working and meeting pupils in the same space was impossible, and that was what many missed during the remote period. Especially in art and skill subjects, such as music, doing things together and feeling togetherness play a really big role in teaching. When these were missing, it was challenging to reshape teaching serving the objectives of the subject and make it liked by the pupils.

In addition to in-person education, the teachers could appreciate their contribution to work afterwards. According to teachers, at the beginning one's own work seemed chaotic and illogical, and teachers were afraid that they would not be able to organize quality teaching. In hindsight, it became obvious that many things could be taught during the distance teaching period, and how creatively the problems of teaching could be solved. Many teachers felt that the distance teaching period had developed their teachership. The new and challenging situation made teachers develop different new ways of teaching and learn how to use new devices and applications. Among other things, ICT skills were considered to have developed over the remote period.

> *"I learned about music, especially to use those programs and applications because, I mean, my studies are back in time, I graduated in 2009, and PowerPoint and Word were not in use then (chuckle), so it's good that I was even able to learn to use Sway or Forms and others".* (Teacher 9)

The use of familiar teaching methods also took on new dimensions as they were transferred to DL. For example, listening to music in the future will no longer be just a matter of listening and discussing, but instead will be combined in various ways with other music content. Although DLIM was challenging in many ways, it was also of great benefit to some pupils. Teachers found that, especially what concerns shy pupils or those who need peace and quiet to be able to work well, DL made it easier to study music. Pupils, who had been hitherto unnoticed in the classroom, now, having worked at their own pace, were given opportunity to show their competence.

> *"[…] I think it is a really fine thing that the pupils who in classroom environment may be a little shy and don't dare show their own skills in a big group, could show their skills quite differently when they made a videotape and recorded their performance. Their skills came out in a different way. They dared make those videos and sent them to me. They sang and played or made their own compositions".* (Teacher 3)

Teachers felt that videotaping the performance at pupils' own pace gave pupils more freedom to express themselves. In the classroom, the presence of a teacher and other

pupils may increase performance pressures, so DL discovered latent skills of many pupils.

Distance education also created a favourable impact on activities of full-time education. The bolder appearance of shy pupils through videotaping was one means of instruction which some teachers kept practising also after the distance education period. One teacher said that in the future he would let pupils take singing exams by videotaping a song and then sending it to the teacher afterwards. Applications and teaching platforms used in distance education also partially remained in teachers' practice. Sending and receiving assignments and distributing educational materials to pupils via online learning environments may be continued.

> *"[…] I have been at least using those body rhythms in classes this autumn with every group. It has offered ideas at least for future lessons. The rhythm exercises are really good material when you get to know them. I start every hour with body rhythms at the moment".* (Teacher 7)

Educational materials or task packages that have been proven in distance education will continue to be used in in-person education. The accumulated materials were also perceived as useful in case of a similar situation. Other transitions of schools to distance education may lie ahead in the future, so it is good to learn from previous experience. Teachers say that now they are aware of the challenges posed by DLIM and they know what must be done in a different way in the future. Instead of paper tasks, teachers will try to conduct more lessons via video connection, thus reducing the workload drastically. In the future, the limits of working time should also be defined more specifically in terms of quantity and duration.

> *"Maybe now if I had to do it again, I would use more of those live hours because giving pupils independent tasks that I had to check and give feedback on created huge amount of work for me […]"* (Teacher 1)

The distance teaching period was perceived as a very instructive and valuable experience. While DLIM challenged teachers to act in a completely new way, the challenges also brought new doctrines and ideas to develop their own work.

Discussion

Teachers took advantage of opportunities offered by the online environment in diverse ways. Among the devices and applications used, various educational platforms, videoconferencing, and various websites containing educational materials were mentioned most often. Nummenmaa (2012) and Rieldling (2020) see that it is important to combine different instruments in DL to provide sufficient quality. Salavuo (2009) mentions the importance of the versatile use of possibilities offered by the online environment when teaching music in a DL environment. In this research, teachers used a variety of applications and online environments to organize teaching, and they preferred functional tasks. Although tasks given were mainly in a written form, they included diverse activities, as well as a diverse use of ICT in doing tasks.

Teachers chose mostly theory-focused subjects in music teaching as the contents. Playing and making music together, especially in groups, was perceived as

challenging. It was easier to teach subjects remotely, when instruction and implementation were given in writing and were based on pupils' independent work. During the distance teaching period, the content of the curriculum was also implemented well, although group music playing was almost completely excluded. Instead, some of the teachers said they had been able to highlight that educational content which normally had been given less attention in in-person education. Thus, the distance teaching period opened opportunities to give a greater focus on the content, such as listening to music, theory, and history, which often remain secondary during joint playing and making music.

The curriculum describes learning environments in music as being flexible and pedagogically diverse educational situations where everyone can participate in various musical activities and collaborations (Opetushallitus, 2014). The use of ICT is also mentioned as a part of music learning environments and the online learning environment has largely driven the status of the learning environment during the DL period. The pupils' own homes have also served as learning environments, as well as the equipment provided by the home; the musical instruments which were available there have been used at music lessons. Compared to standard classroom work, the learning environments of the distance teaching period have differed greatly from those which pupils are accustomed to. Cooperative activity has not served for a description of learning environments according to the curriculum, as well as different starting points about the instruments. Learning environments have been unequal in some cases. On the other hand, working independently and having a peaceful learning environment have been beneficial to some pupils. In this research, teachers have revealed that shy students demonstrated new aspects of themselves, because they have been allowed to work in peace at their own homes and have not been obliged to perform in front of the whole class. Sainio and colleagues (2020) also described the distance teaching period as having opened more opportunities for shy pupils. General communication with these pupils has improved during the distance teaching period, as it became more personal.

This research shows that ways of working were very diverse, but joint making and playing music was excluded of lessons almost completely. This experience was shared by almost all the teachers participating in this research, and there were only a few mentions of singing together using videoconferencing. Although the curriculum emphasizes the importance of music making, playing together, and collaboration, music can also be studied in a wide variety of other ways. Playing music has undergone changes from playing together to that of independent music making, and while musical instruments were not available for pupils, teachers tried to eliminate this shortcoming by things like body rhythm tasks, or the construction of their own instruments. The curriculum (Opetushallitus, 2014) emphasizes the importance of creative work which offers positive experiences to students. Teachers, too, wanted to underline the fact that pupils should also experience learning music remotely as a positive and comfortable subject. The biggest difference between teaching music in Finland and teaching music in European countries during DL time seems to be in playing band and joint music making. The Finnish teachers mentioned the problems in common music making very often while the music teachers from other countries did not mention it almost at all. This shows that greater emphasis in Finnish music teaching system is laid on playing band and joint music making than it is in other European countries.

In the context of distance education of young pupils, it should be noted that they are not yet very self-directed. Teaching should also be more structured, and teachers should ensure the progress in their pupils' studies. Active interaction can ensure regularity in studies, and the pupils can receive the support they need (Lehtinen & Nummenmaa, 2012; Zilka et al., 2019). Teachers had to make sure that pupils were actively participating in teaching. The means of stimulating them included contact with pupils, supervising tasks, and conducting lessons through videoconferencing, making it easier to observe teaching participation. Motivating pupils and encouraging them to be active went hand-in-hand, and participation was also encouraged by inspiring and motivational tasks. Teachers maintained that ultimately the best way to motivate pupils for an active participation was to contact them directly and support those pupils who had learning challenges.

One of the most significant challenges in distance music teaching was the increased workload due to the lack of ready teaching materials, providing feedback on pupils' assignments, and nonstructured working hours. Other studies from the Spring 2020 distance education period also emphasize this: many teachers have experienced a higher workload than usual (Opetusalan ammattijärjestö, 2020; Adedoyn & Soykan, 2020). Distance education studies conducted before 2020 do not describe distance education as equally challenging and the problems have mostly been caused by challenges in technology and communication (Ruippo, 2009; Nummenmaa, 2012). If it is possible to plan distance education in advance, the benefits of distance education will be better highlighted. Previous studies have also stressed the importance of advance preparation and planning. In the Spring of 2020, teaching moved to distance education on such a fast schedule that teachers had very little time to get ready for distance education. This was reflected in the huge amount of work needed to prepare, in addition to the usual teaching work, as it took a lot of time to deploy equipment, applications and tools. There was also no time for planning distance education and the teachers explained what a huge amount of extra time and work was needed to find educational material. In addition, music is a subject where teaching takes place functionally, and all the needed materials and exercises are not transferable to students online. Therefore, the distance teaching period in Spring 2020 was certainly perceived as challenging, as it was not possible to prepare as necessary in advance. Experiences of DL could have been quite different if the transition to distance education would have been known in advance and the transition had occurred over a longer period than just a few days.

As other distance education studies have noted, communication with pupils during DL is sometimes challenging. This is especially in case of pupils who face challenges in terms of pre-existing motivation and focus on tasks (Shaw & Mayo, 2021). Teachers said that communication was one of their problems too. Although attempts were made to activate pupils in tasks, some seemed to drop out of teaching easily, or had difficulty in completing the tasks. The instruction had to be clear, so that the learning objectives were sure to be understood. The teacher also became more active in contacting pupils in order to ensure pupils' participation. Therefore, contact was required, and the teachers even called home to wake pupils up in the morning and gave them instructions on how to complete their schoolwork. Lack of reliability is one of the factors that hinder DL. The teachers could work better if they did not have to spend time on making pupils do their work.

Teachers' experiences showed that in the DLIM it was necessary to abandon the traditional classroom workforms, especially concerning music making and singing. Teachers reported that they almost completely omitted joint music making and playing, focusing more on teaching music by other means. This challenge was also reflected in this research and the teachers commented that music teaching had been particularly challenging from that point of view. Especially those teachers whose teaching had been mostly oriented towards playing and singing together, felt DL was challenging and planning the content of lessons required more work. However, some teachers were encouraged, despite the challenges, to try singing with the class remotely, although in these cases the pupils were unable to hear each other, and the teacher could not be entirely sure how actively the pupils were involved in music making at home. As for common music making, DL still needs development and its implementation requires alternating activities, where different parties can hear each other simultaneously. Perhaps in the future, if network connections are made so fast that real-time transmission will be available to both parties without delay, co-music-making will be possible in the form of DL.

Studies have mentioned that varied use of equipment is preferred in distance education. From this point of view, simply sharing tasks is rather one-dimensional DL (Nummenmaa, 2012; Rieldling, 2020). In DLIM, teaching via videoconferencing corresponds most to a teaching situation like that of in-person education (Ruippo, 2009). Many earlier studies have focused on DL of instruments, where it has been easier to arrange remote connections between teachers and pupils. Distance education has also been mostly utilized by older pupils, for example in vocational studies in music, with different motivation and starting points for pupils to study music than those of primary school pupils. Therefore, it cannot be assumed directly that there would be opportunities in primary school teaching for lessons held via video connection. A challenge for real-time teaching is also the lack of concentration among young pupils. Most pupils also do not have the needed musical instruments at home, making it impossible to study playing. Focusing on written music issues is therefore well justified during the distance teaching caused by the COVID-19 pandemic. Teachers felt that teaching music had fallen short in quality during DL. The fact that despite the challenging circumstances the teachers were able to organize diverse distance education in music was already a wonderful achievement. Fortunately, the teachers were able to meet these challenges by giving themselves mercy and facilitating teaching both for themselves and for the pupils.

The distance teaching period in Spring 2020 presented not only challenges, but had also provided opportunities to develop the skills of teachers. In previous studies, teachers have felt that distance education has given them new means and ideas for the implementation of teaching. Digital competence has increased with DL, and teachers have added pedagogical versatility in their teaching (Nummenmaa, 2012; Ahstiainen et al., 2020; Sainio et al., 2020). Likewise, according to this study, the teachers have experienced the same, and this experience is evidenced in the improvement and diversification of their digital competencies. Some of the teachers have had low previous ICT skills, but with the introduction of DL, to know how to use them has been compulsory. At the same time, these teachers have noticed what opportunities online education can give to their teaching. The modes and routines used in DL have also remained permanently in use, for example tasks could still be restored in an online

environment or playing and singing samples could be videotaped and sent to the teacher.

The distance teaching period also left behind the idea of how teachers would act upon the arrival of a similar situation again. Teachers saw that it was very important in DL to keep tasks clear and simple enough. There should not be many different points in the instruction, and fewer tasks which must be returned to the teacher should be given to pupils in the future. This would allow the reduction of the amount of work related to grading tasks. Motivational and fun tasks can also minimize pupils' frustration. Teachers also would benefit from teaching more via videoconferencing and avoiding task returns and making the lessons more like an in-person education situation. Video conferencing makes it easy to establish interactions between participants (Ruippo, 2009).

Teachers also noticed the importance of the role of lesson planning. Moving to distance education without a more serious preparation made it very challenging to design lessons in a hurry. Lesson design is also highlighted in many previous publications on distance education (e.g., Brändström, et al., 2012; Mantila et al., 2015; Sergejeff, 2020). In music DL, it is very important to ensure the functionality and quality of the hardware so that sound is transmitted between the parties as genuinely as possible (Ruippo, 2009). Now, that this distance teaching experience has been left behind, teachers already have good experience and a bank of materials for a possible future distance teaching period. Thus, in advance, the planned model for switching to distance education is in place so that a future transition to distance education can be arranged as smoothly as possible.

Ethics and Reliability of the Research

Research ethics involves adhering to good scientific practice. This includes honesty, accuracy and diligence, which applies to the entire research process. The information-acquisition, research and evaluation methods of research must also be ethically sustainable. The work and achievements of other scientists should be respected and referred to appropriately (Research Ethics Advisory Board, 2012). This research has followed good scientific practice carefully, accurately, and honestly. We have reported it in a consistent manner. The theory background of the research has been properly referenced.

The material has been compiled through interviews with music teachers. Requests for interviews were made properly and those interviewed were made clear about the voluntary nature of participation in the study. Prior to the interviews, a confidentiality of personal information form was sent to the teachers being interviewed, clarifying that the material will be handled anonymously throughout the investigation and the interview recordings will be properly disposed of after the investigation is completed.

Conclusions

The distance teaching period of Spring 2020 was a memorable and challenging experience for teachers as they managed to organize teaching in a high-quality and varied manner. Teaching music and other art subjects presents their own additional

challenges due to their pragmatism and functionality, which makes it challenging to transfer them directly to online study. Respondents of this research managed to meet the challenges and learned new ways that they will be able to use in their own teaching future.

This research revealed the challenges and opportunities that teachers experienced in DLIM during mandatory closure of in-person schooling due to the COVID-19 pandemic. In addition to the experiences of teachers, it would be interesting to hear the ways pupils experienced studying music remotely. Perhaps the pupils also felt that music was lacking in the essentials, which include playing and making music and studying together with classmates. Or perhaps, the pupils experienced studying different kinds of music as a welcome exception. The experience of teachers and pupils could also be compared with each other, perhaps revealing an even clearer picture of what works in a distance education in music and what needs a further development.

Distance learning and online learning in music at best open additional opportunities for studying music and facilitate the organization of teaching in challenging situations, such as long distances (Ruippo, 2009; Brändström et al., 2012). In addition, DLIM should not consist of independent work; instead, online education in music opens opportunities for diverse communication. Music-related ideas, compositions, and insights can be easily shared with others interested in the subject and discussed, and feedback and commentary can be provided as well (Salavuo, 2009). Thus, DLIM can also be a communal activity if the right framework is provided for it. Although DLIM has its own challenges, perhaps in the future, more high-quality distance education can be arranged by clearly identifying and addressing the challenges. Better preparation and diversified resources for DLIM can create supportive and creative activities in a larger group context.

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CLASS TEACHER STUDENTS' SELF-CONCEPT IN DANCE

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Abstract
This study examines the dance self-concept of student teachers studying physical education as a minor subject at the University of Eastern Finland (UEF). The theoretical framework is based on the position of dance in Finnish basic education, teacher education, and self-concept. The study represents qualitative research, and the data was analysed using theory-based content analysis. The purpose of the study was to explore the nature of student teachers' self-concept in dance and the factors affecting it. Data were collected with an electronic questionnaire from 32 respondents. The results show that close to half (14/32) of respondents had a positive self-concept, around one in ten (3/32) a neutral self-concept, and one third (9/32) a negative self-concept in dance. Six respondents' self-concept in dance remained undefined. Previous hobbies, gender, and sense of rhythm had the biggest impacts on dance self-concept.
Keywords: *self-concept in dance (dance self-conception), dance education, self-concept, teacher education*

Introduction

Our research is based on the status of dance in primary education in Finland, as well as student teachers' self-concept, the factors affecting it, and the connection to beliefs about self-efficacy. Despite the attempts of dance professionals (Anttila, 2013), dance does not have the status of a subject as part of art education in the latest curriculum in Finland (Anttila, 2013; Anttila, Jaakonaho, Kantomaa, Siljamäki & Turpeinen, 2019). Even though dance was not given official status in primary school (Anttila, 2013), the curriculum obliges to teach dance or body expression to some extent as part of other subjects (Opetushallitus, 2014). For example, in physical education, dance is mentioned as a part of versatile movement and in music education it is an important part of the music and movement study module (National Core Curriculum for Basic Education, 2014).

In teacher education, dance is taught as part of the pedagogical studies of physical education, and it is also approached in music studies in the form of music movement.

In the Department of Teacher Education at University of Eastern Finland (below – UEF), all skills and arts subjects – music, visual arts, crafts, and physical education – are integrated into three large entities (UEFOPS, 2018–2021). According to the course descriptions, a total of 10 hours of major group teaching and 48 hours of minor group teaching are allocated for physical education as well as other arts and skills (the course descriptions can only be found through the IDs of UEF). UEF offers an opportunity to complete undergraduate studies in physical education as a minor subject. Beginning in spring 2018, students in early childhood education and special pedagogy, class teacher students, and subject teacher students (Itä-Suomen yliopisto, filosofinen tiedekunta, 2017) have been able to apply to this minor subject. We wanted to explore students who were completing a minor in physical education as the extensive 25-credit minor studies offer more comprehensive physical education compared to multidisciplinary courses. Consequently, a greater proportion of dance and music and movement studies are also included.

Teachers' self-efficacy beliefs and self-conception have always had an impact on students' learning outcomes (Ashton & Webb 1986; Tschannen-Moran & Woolfolk Hoy, 2001), this is also true concerning dance studies (see Schupp, 2010). According to Woolfolk Hoy and Davis (2005), teachers with a strong belief in their own ability to teach a particular subject are motivated to teach it (p. 120). In turn, teachers with an uncertain view of their own skills in a certain subject are inclined to avoid teaching it (Anderson, Greene & Loewen, 1988; Coladarci, 1992; Bandura, 1994, 1995; Renne, 2015). Therefore, we wanted to find out what the future teachers' relationship to dance is according to their own assessment. Utilizing models of self-conception, we explored different dimensions of self-conception in dance, forming them into a whole. The purpose of this study was also to determine what factors contribute to the formation of student teachers' dance self-conception in order to provide direction for further research on the development of dance education in elementary school and in teacher education.

Dance and Its Role in Finnish Society

Dance is part of cultural behaviour influenced by human values, beliefs, and attitudes. It is an independent, influencing factor in culture and society (Hoppu, 2003; Lehikoinen, 2014). However, dance is not merely a phenomenon based on human corporeality and sociability but is strongly associated with individual experiences. It is a diverse, body-driven activity that requires awareness and concentration. Dance can produce experiences, impressions, sensations, and emotions. It involves issues such as problem solving, creative self-expression, producing one's own movement, and building a composition (Bandura, 1983; Anttila, 2009; Vitola, 2013; Lehikoinen, 2014). Dance is also strongly associated with musical talent and sense of rhythm, listening to music, and being absorbed by it (Viitala, 1998; Juntunen, Perkiö & Simola-Isaksson, 2010; Anttila, 2013).

Anttila (1994) divided dance into three basic pedagogical concepts: early dance education, dance education, and dance instruction. Dance education is usually limited to learning and practicing different dance techniques, while dance creation is holistic. Dance instruction is part of dance education and is based on most art dances, competitive dances and other dance genres based heavily on technique. In dance

education, on the other hand, the focus is on the basics that are common to all dance styles, such as body-expression, aesthetic observation of movements, and positive experiences of self-expression through movement. Performance accuracy is not necessarily central in dance education, enabling experiences of success for those who fail to attain these experiences in other, performance-oriented sports (Siljamäki, 2007; Laakkonen, 2009; Anttila, 2013). The dance content in basic education is dance-educational and based on bodily expression (Viitala, 1998; Anttila, 2013; Nirhamo, 2016).

Dance forms are numerous, depending on their purpose and origin (Lehikoinen, 2014). The primary purpose of social dances, such as ethnic, stage dances and old dances, in high school are togetherness, social interaction, and fun. Also, creative dance may fall among social and inclusive dance (e.g. Viitala, 1998). The other extreme of these are performing dance forms, such as ballet, modern dance and tap. There are also numerous dance forms between these so-called extremes that combine both, such as breakdance, hip-hop and other street dance forms (Anttila, 1994; Nieminen, 2007).

The research question setting of this study does not distinguish dance by any category; rather, the concept of dance may include all of the above-mentioned forms of dance, depending on how the concept of dance is interpreted by those involved in the study.

The Role of Dance in Primary School and Teacher Education

Dance has been proven to have a lot of positive effects on the holistic wellbeing and school amenity of children (Sansom, 2011; Anttila, 2013; Anttila et al., 2019; Anttila & Svendler Nielsen, 2019). Dance is mentioned in the latest Finnish curriculum as just one part of varied movement in the field of physical education (Opetushallitus, 2014). Therefore, the teaching of dance is solely dependent on whether the gym teacher has the skills and desire to teach dance in their classes (Laakkonen, 2009; Anttila, 2013). Despite the attempts of dance professionals and advocates for the importance of dance education, dance was not included as the subject of its own in the curriculum that took effect in autumn 2016 (Anttila, 2013).

The teaching of dance varies greatly among Finnish schools because teacher education institutes do not provide sufficient unified capacity for teaching dance (Laakkonen, 2009). The teacher's own proclivity towards dance plays a big role, as their personal experiences guide their choices in terms of working habits and goals. For example, if a teacher regards dancing only as a form of fitness, the art educational side of dance remains unaddressed (Woolfolk, Rosoff & Hoy, 1990; Siljamäki, 2007; Laakkonen, 2009; Anttila, 2013). Siljamäki (2007) underlines that it is important for teachers to be aware of their own dance preferences, as their relationship with dance may be very different from that of the pupils.

Effect of Gender Attitudes on Dance

Dance is very strongly associated with gender prejudice. It is often considered a feminine form of art and, consequently, starting from a young age, few boys engage in dance (Anttila, 1994, 2013; Risner 2007). Throughout history, in societies that

emphasize male masculinity dance has been seen as a feminine art form and male dancers have been labelled as homosexuals, extensively restricting male dancing (Butler, 1990; Lehikoinen, 2004, 2006; Risner, 2007; Burt, 2007, 2009). With this tendency in Finland, dance began to be heavily modified in a heteronormative direction, that is, to remove feminine features from dance to bring boys and men into dance circles (Lehikoinen, 2006). Nevertheless, dance is still seen as an exceptional phenomenon in the present day among boys and men, and boys who practice or pursue dance are still a rarity (Turpeinen, 2015).

Engaging boys in dance lessons also causes confusion among dance teachers and often forces them to modify their teaching habits (Löytönen, 2004). Anttila's 'Whole School Dancing!' research project, in which dance was included as part of one school curriculum over four years, showed that many teachers found motivating boys to dance to be challenging. One interviewed male teacher said that his own negative attitude towards dance has a direct impact on his pupils and their motivation. One of the main objectives of the project was to dismantle preconceptions of gender in dance. During the project, it was noted that boy pupils especially in the first and second grades (age 7–9) entered well into the project. Gender differences were more pronounced in the upper grades. The research project revealed that boys in upper comprehensive school (age 13–16) found it difficult to admit their enthusiasm for dancing. Teachers also felt it challenging to discern whether pupils are covering up their enthusiasm due to social pressure, or whether their experience of dance is actually negative (Anttila, 2013).

Self-conception

Self-conception refers to one's perception of oneself. The formation of a person's self-conception is influenced by their environment and the groups of people with whom they have interacted and continue to interact with. Self-conception is in constant change, influenced by experiences of good self-efficacy and being accepted. According to Burns (1982), self-conception is multifaceted and consists of several different perceptions of the self. Moreover, according to Shavelson, Hubner and Stanton (1976), self-conception can be used to predict the actions of an individual in a variety of situations. Self-conception therefore helps to explain and predict the behaviour of an individual.

Shavelson, Hubner and Stanton's (1976) model of self-conception is hierarchically divided from general self-conception into increasingly smaller aspects of self-conception. The academic self-concept shapes the perception that a person has of themselves as a student and how he/she feels they are coping in different subjects. Other aspects of self-conception include social self-conception, comprising interpersonal relationships, emotional self-conception responsible for handling emotions, and physical self-conception, which, in turns, include a person's perception of their own physical ability and appearance. These can all yet be divided hierarchically into smaller parts, depending on what aspect of self-conception one wishes to look at (Shavelson et al., 1976; Davis & Yates, 1982).

According to Burns' (1982) self-concept theory, the concept of self has three dimensions: a conscious understanding of the self, i.e. what a person feels they are; an

ideal vision, i.e. what the person would like to be; and a comrade perception, i.e. how the person believes others might see them. These dimensions are further divided into physical, social, academic, and emotional aspects.

Tulamo (1993) applied the models of Shavelson, Hubner and Stanton, as well as Burns' self-concept, in her own research, in which she looked at the musical self-conception of schoolchildren. In her own model of musical self-conception, Tulamo does not distinguish between academic and non-academic subdivision as closely as Shavelson, Hubner and Stanton. She shares musical self-conception in the manner of Burns with a known, ideal and comrade concept, which are still divided into a musical conception of straightforward, social, emotional, and physical-motor musical self-conception (Tulamo, 1993). In the model of dance self-conception of this study (see Fig. 1), we have used the hierarchical structure of the model of self-conception by Shavelson, Hubner and Stanton as well as Burns' model of self-conception, and applying Tulamo's model of musical self-conception, which is a combination of the previous two.

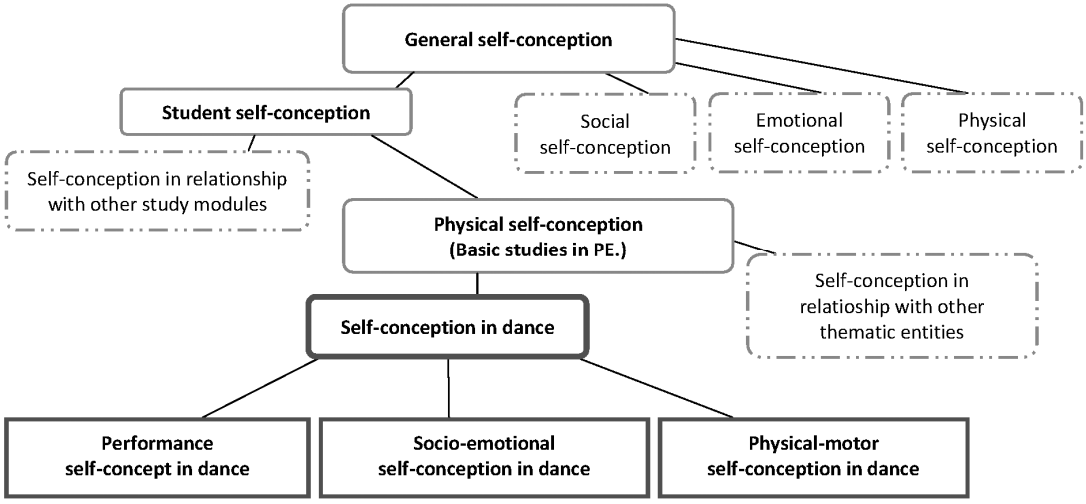

Figure 1. The structure of self-conception in dance

Implementation of the Study

The data was collected through an online questionnaire during the winter of 2018–2019. A total of 32 student teachers with a minor in basic physical education studies participated in the study. Of the participants, 11 were male and 21 females. Respondents were asked to write an approximately one A4 page length reflection on their own dance ability and the factors that might affect it. Examples had been given in the assignment to support the reflection. In addition, respondents were asked to consider their own readiness to teach dance in the future. The study is qualitative. For data analysis we used a theory-driven (abductive) method of content analysis, which applies both theoretically defined models as well as data-oriented reasoning (Tuomi & Sarajärvi, 2002).

Research questions

1. *What is the self-conception in dance of student teachers who are qualifying with a minor in physical education?*
   Sub-question A) What is their performance dance self-conception?
   Sub-question B) What is their socio-emotional dance self-conception?
   Sub-question C) What is their physical-motor dance self-conception?

The main purpose of the study was to identify the dance self-conceptions of the student teachers participating in the study. General dance self-conception consists of three sections in this study: performing dance self-conception, socio-emotional dance self-conception, and physical dance self-conception.

2. *What factors affect the dance self-conception of the respondents (student teachers qualifying with a minor in physical education)?*

Human self-conception at a general level is constantly shaped by the environment, other people's opinions, and personal experiences of success (Burns, 1982). Therefore, it can be assumed that there are also various similar factors behind dance self-concept.

3. *What is the readiness of the respondents (student teachers qualifying with a minor in physical education) to teach dance in future?*

The study mapped student teachers' perceptions of their ability to teach dance in their future profession and also examined whether this is significantly associated with their dance self-conception.

Results

In our study, we looked separately at each aspect of dance self-conception (performance dance self-conception, socio-emotional dance self-conception, and physical-motor dance self-conception).

Research question 1: *What is the quality of the dance self-conception of the respondents (student teachers qualifying with a minor in physical education)?*

We grouped all self-conceptions into four categories: negative and predominantly negative (see Table 1), positive and predominantly positive (see Table 2), neutral and predominantly neutral (see Table 3), and contradictory (see Table 4) dance self-conception.

Table 1. Negative and predominantly negative dance self-conception
(Total 9/32, Male 4/11, Female 5/21)

M=male F=female	Performance self-conception	Socio-emotional self-conception	Physical-motor self-conception
M 26	negative	negative	negative
M 29	negative	negative	negative
M 16	negative	neutral	negative
M 8	negative	neutral	cannot define
F 7	negative	negative	negative
F 30	negative	neutral	negative
F 12	negative	positive	negative
F 18	negative	positive	negative
F 21	neutral	negative	cannot define

Table 2. Positive and predominantly positive dance self-conception
(Total 14/32, Male 3/11, Female 11/21)

M=male F=female	Performance self-conception	Socio-emotional self-conception	Physical-motor self-conception
M 5	positive	positive	positive
M 31	positive	positive	cannot define
M 2	negative	positive	positive
F 3	positive	positive	positive
F 11	positive	positive	positive
F 14	positive	positive	positive
F 19	positive	positive	positive
F 22	positive	positive	positive
F 6	positive	positive	cannot define
F 27	positive	positive	cannot define
F 13	positive	positive	neutral
F 20	neutral	positive	positive
F 24	positive	positive	neutral
F 25	neutral	positive	positive

Table 3. Neutral and predominantly neutral dance self-conception
(Total 3/32, Male 3/11)

M=male F=female	Performance self-conception	Socio-emotional self-conception	Physical-motor self-conception
M V9	negative	neutral	neutral
M V17	neutral	neutral	neutral
M V28	neutral	neutral	cannot define

Table 4. Contradictory dance self-conception
(Total 6/32, Male 1/11, Female 5/21)

M=male F=female	Performance self-conception	Socio-emotional self-conception	Physical-motor self-conception
M 15	neutral	positive	negative
N 1	neutral	positive	negative
N 4	negative	positive	neutral
N 10	neutral	positive	negative
N 23	positive	negative	cannot define
N 32	negative	positive	neutral

The quality of holistic dance self-conception is determined by what quality is represented mostly in the different areas of dance self-conception. A conflicting group was formed from such responses where each subdivision was of a different quality. Regarding the six responses whose physical-motor dance self-conception we were not able to define, our rating is based on positive and negative aspects. For example, if a respondent's performance dance self-conception was positive and socio-emotional dance self-conception was neutral, we categorized this response as predominantly positive.

Research question 1

Sub-question A) *What is the quality of respondents' (student teachers qualifying with a minor in physical education) performance dance self-conception?*

In this study, we refer to a person's perception of their own performance, abilities, and sense of competence in relation to dance. In the questionnaire, we referred to this point by urging respondents to reflect on themselves as dancers in a variety of dance-related situations. Positive performance dance self-conception was found in 12 respondents (10 female, two male). Of this group, eight females felt that their strong positive assessment of performing dance was influenced by their past experience, having danced as a hobby.

> *"I belonged to a performing dance troupe for about six years, from the beginning of middle school to the end of high school. Dance has been a part of my life for a long time."* (V13)

> *"Since I was little, I've been involved in various musical activities and dance and gymnastics groups. […] Music and musical movement have been strongly present in my life. I like dancing and it's been really natural and meaningful for me."* (V14)

> *"I never danced as a hobby, but through gymnastics and TeamGym, and I have performed dance-like gymnastics sets for several years. […] I'm able to move my body well to the pace of music and at the same time be absorbed in music."* (V24)

The remaining respondents assessed their dance skills as good for a variety of reasons, such as courage or sense of rhythm.

> *"I've always been physical and even a bit musical in my opinion. I have a good sense of rhythm and I can move quite well to the pace of the music."* (V5)

Negative performance dance self-conception was found in 12 respondents (three female, nine male). In their responses, men underscored the fact that because of their gender they have never joined any dance groups and for this reason have not gained enough experience of dancing. Uncertainty about their competence due to lack of experience was also highlighted by some women.

> *"As a man, I never danced much in childhood or adolescence because boys don't dance. Dance hasn't grabbed my interest at all either."* (V2)

> *"For me, since I was a child, I've had the impression that dancing was a girls' thing. Because of that, I have never practiced it, and it's always been a very distant thing to me."* (V8)

> *"Dancing has always been an issue I've wanted to learn and know how to, but I feel I can't. […] I feel that I have a sense of rhythm through other hobbies, but its transition to dance (say, hip-hop or aerobics etc.) feels difficult."* (V32)

Neutral performance dance self-conception was found in 8 respondents (five female, three male). These respondents felt that they could dance to a degree, but that they lacked any real skill of dancing. Reasons for this insecurity included lack of personal free-time engagement in dance, motivation, or sense of rhythm, as well as narrow competence in the respondents' own view.

> *"When dancing alone, you feel like you're somehow too exposed and judged. […] When dancing with a partner, there's more emphasis on collaboration and you're not singled-out in the same way. I also have more experience of pair dancing […]"* (V15)

> *"I think playing the guitar when I was younger helps me find the rhythm when dancing and to keep to it. I'm also not that afraid to screw up, and I easily get excited about challenging things, so going out of my comfort zone when dancing doesn't seem that insurmountable. I generally have a neutral attitude towards dancing."* (V21)

Research question 1

Sub-question B) *What is the quality of respondents' (student teachers qualifying with a minor in physical education) socio-emotional dance self-conception?*

By socio-emotional dance self-conception, we refer here to how people experience themselves in relation to other people in dance situations, as well as the kinds of emotions they experience when dancing. For example, whether the opinions of other people affect the performance and sense of meaningfulness of their dancing.

Positive socio-emotional dance self-conception was found in 21 respondents (four male, 17 female). Members of this group were selected based on their mention of

dance as producing positive experiences. This group featured both participants with a strong dance background as well as those who did not practice dance as a hobby.

> *"I've never really practiced any dance (except old folk dancing at school), but especially from teenage onwards I've liked dancing, though mainly I've only danced by myself at home."* (V5)

> *"For me, dancing has always been a very natural way of expressing myself. I love music and I often want to get up and dance if I hear something that I like. I'm not embarrassed to dance in public and I often feel relaxed while dancing."* (V22)

> *"I really like dancing a lot. I dance at home while making food, I often dance to the end of the night at clubs, and I also dance in the lessons of the music and movement study module of the physical education minor programme."* (V3)

There were also some respondents in this group who felt uncomfortable dancing alone as well as with others. However, this did not significantly affect the meaningfulness of their dancing overall.

> *"It's only recently that I've started to get enjoyment from dancing in the sense of a good mood. Being at a more mature age, I no longer care about the opinions of others, and I have attended both ballet and other dance classes."* (V2)

> *"I see dancing somehow as a deeply personal thing because the body expresses itself and its emotions so clearly. […] In the end, however, I enjoy dancing a lot and have thought about starting dance classes."* (V12)

Negative socio-emotional dance self-conception was found in five respondents (two male, three female). In this group were respondents who mentioned not enjoying dancing for one reason or another. The reasons cited included fear of failure, the body aspect of dancing, and lack of interest.

> *"I always react to music with my body and for good reason, too; it would be nice if dancing was more natural to me. However, the fear of failure has always been so strong (this, of course in other areas too) that I'm not particularly inspired to try dancing outside of the school environment."* (V7)

> *"I've found that I like supervised dance aimed at improving my physical condition better than creative dance. I like, for example, to take aerobics group exercise classes for leisure, but the more dance-based Zumba lessons have not attracted my interest. I also find dancing in bars a bit embarrassing."* (V21)

> *"The problem is the rigidity and stiffness of my movement. […] My approach to dancing and its different forms is therefore a bit negative. I don't like dancing or expressing emotions with my body."* (V29)

Neutral socio-emotional dance self-conception was found in six respondents (five male, one female). We categorized responses as neutral when the respondent

maintained that they only felt comfortable with certain styles of dance. We also categorized responses where the respondent's socio-emotional relationship with dance had recently changed as neutral.

> *"...I've also been afraid of what other people might say about my dancing. The opinions and glances of others have influenced my attitude. […] At the moment I have an open mind about dancing, and I don't care anymore about what others think. This has been greatly influenced by the music and movement study module of the physical education minor studies."* (V30)

> *"Dancing alone I've never liked, but I like pair dances. Dancing alone, you feel like you're somehow too exposed and evaluated."* (V15)

> *"Even though my dancing looks stupid I don't let it affect the performance itself. I rather think that it doesn't matter what others think or what my dancing looks like, I do things for myself not others. […] Of course, I don't like all dance types because my sense of rhythm isn't very good. […] In some dances all my concentration goes on searching for the rhythm and staying in it. I can't really get anything out of that style of dancing, and I don't like it much."* (V16)

Research question 1

Sub-question C) *What is the quality of respondents' (student teachers qualifying with a minor in physical education) physical-motor dance self-conception?*

In the responses, the most central skills were staying in rhythm and synchronising leg and hand movements. In addition, in this sub-question we also considered mentions of choreograph design expertise. Bodily expression highlighted how much the respondent dares to express themselves with their body and how they experience their body in dance situations. Six responses were left undefined in this section because the respondents' physical-motor dance self-conception could not be defined based on their expressions.

Positive physical-motor dance self-conception was found in nine respondents (seven female, two male). In this category, we included responses where respondents felt that their motor skills were good in dancing and that their bodily expression was meaningful. We also interpreted respondents who had good ability to design choreographies as positive in this category.

> *"Blending music and movement has always been easy and I've always liked to design different choreographies."* (V11)

> *"I'm used to watching in a mirror and in videos how I dance, so I don't feel insecure dancing in front of a camera or the mirror. I'm used to analysing my own dance and my group."* (V19)

> *"I like expressing myself bodily and, in the PE, minor studies it was awesome to find that improvisational exercises still felt meaningful […]"* (V25)

Negative physical-motor dance self-conception was found in 10 respondents (six female, four male). We categorized as negative those responses from which we

interpreted the respondents as experiencing the bodily aspect of dance as uncomfortable. These respondents also considered, in their opinion, that they lacked the motor skills that dancing requires.

> *"I still fell on edge if someone (e.g. a teacher) watches me dance; my feet immediately go into a knot. My body has also changed, and I've become more insecure about that."* (V1)

> *"[…] my body is relatively stiff and, for example, contemporary dance and other dances requiring flexibility are challenging already in that respect."* (V7)

> *"[…] I don't feel like I'm very good at expressing myself with my body. I'm somehow shy about my movements, and I'm not brave enough to hang loose like I should."* (V15)

> *"When I try matching my arms with my leg movements, I get very quickly and easily confused."* (V29)

> *"I've always wanted to escape from situations that involve dancing. The biggest factor in this has certainly been the body and the sight of it."* (V30)

Neutral physical-motor dance self-conception was found in 6 respondents (four female, two male). As neutral or contradictory, we categorized those responses where only motor skills or body expression was perceived as good, or both were somewhat uncertain.

> *"Dancing is nice if you have a feeling that it doesn't matter much, even when you go crazy in between steps. […] On the other hand, it feels nice to do and try different movements with my body and learn new moves. I don't experience dancing in any way as distressing unless the dance is only all about spinning the hips and butt."* (V4)

> *"[…] but creative dancing just didn't go anywhere near too smoothly, throwing myself felt challenging. Today the situation has changed a lot, and I can kind of dance fairly ok now in almost any situation. I guess my dancing still doesn't look that great to an outsider though […]. In the past, for example in aerobics, simultaneous movement of hands and feet felt particularly challenging."* (V17)

Research question 2

What factors affect the dance self-conception of the respondents (student teachers qualifying with a minor in physical education)?

Sense of rhythm and musical talent are strongly associated with dancing (Viitala, 1998; Anttila, 2013). Dance can also be a means of teaching music because music can be manifested through dancing (Juntunen et al., 2010). Of the study participants, nine felt that they did not have a good enough sense of rhythm or musical talent for dancing. These respondents told that particularly due to their weak sense of rhythm it is tricky for them to remember step sets and keep up with choreographs. Of this group, four had a negative dance self-conception, three had a positive dance self-conception, and two had a neutral or contradictory dance self-conception.

> *"I don't like all dances because my sense of rhythm isn't very good. […] In some dances all my concentration goes on searching for the rhythm and staying in it."* (V16)

> *"I don't feel like I have a good sense of rhythm, but I still like to move to music […]."* (V25)

All 14 respondents were fairly or very certain of their sense of rhythm, but felt their own musicality was either weak or there was no mention of it in the text. Most of the respondents in this group felt their sense of rhythm was strongly associated with their dance skills. Of this group, eight respondents had a positive dance self-perception, five had neutral or contradictory dance self-perception, and only one had a negative dance self-perception.

> *"I would say I have a good sense of rhythm because I feel I can move according to the rhythm, and I can find the basic rhythm in songs."* (V6)

> *"I've always considered myself unmusical, but thanks to dance classes I feel it's easy to find the right rhythm in music, while rhythming dance sets have also become familiar."* (V11)

> *"I stick well to the rhythm and it's easy for me to find the pace in different songs. I feel that a sense of rhythm can be found in me naturally, and I don't have to think about the pace, for example when learning choreography."* (V14)

Musicality and sense of rhythm were experienced by eight respondents. Three of these respondents had a negative dance self-conception, three had a positive dance self-conception, and two had a contradictory dance self-conception.

> *"I'm very physical and musical. Dance, however, has never felt very much like my own way of moving."* (V8)

> *"I consider myself a musical person with a good sense of rhythm. I often dance and sing alone to the rhythm of music."* (V20)

The influence of gender was particularly highlighted in the responses by men. Only four women mentioned that gender has had an impact on their attitude to dance; two of them pondered that girls are supposed to like dancing and learning how to dance better than boys.

> *"As a female, I feel that girls are required and assumed [to participate] more when it comes to dance in school (perhaps this has affected my own attitude too). Girls should learn the dances faster and be better. During my own school, PE classes usually only had dancing for girls, while the boys played something."* (V7)

> *"My gender certainly affects my attitude. As a girl, I ended up in dance classes, and not, say, an ice rink (voice escalating). […] On the other hand, dancing is also considered a girly sport, bringing the pressure that I should know about it or dance a certain way."* (V11)

In addition to these, two women considered the impact of gender on a general level, for example in the future when planning dance instruction. The remaining 26 female respondents did not consider the effect of gender at all. Of the men, nine out of 11 addressed in their responses the impact of gender and the pre-assumptions related to it. Most of these wrote that their attitude to dance had been influenced or still was influenced by prejudice.

> *"Gender has surely contributed to how much I've danced as well. During middle school, it didn't even cross your mind to start dancing. I'm sure it wouldn't have been a good idea in my group of friends around that time. In high school, it might have already been considered, but maybe at that time there was still a sense in myself that men don't dance. I don't know where this is from."* (V15)

> *"I think my gender has had a bit of an impact on dancing not being the most preferred form of exercise for myself. Even in elementary and middle school, dancing was more of a girl's thing, and yes that attitude still appears in me."* (V28)

> *"My gender has certainly affected different aspects of my school physical education, there has been more music movement in girls' PE as I understand, and we boys have had more games. Certainly, this has partially negatively affected my perception of dance in schools and in life overall, but that perception is crumbling."* (V31)

Some of the respondents who considered the impact of gender also mentioned that in school physical education girls are taught dance more than boys, which has affected their dance skills.

Previous dance experiences and hobby background were clearly linked to the students' dance self-conception. Many respondents with a positive dance self-conception had some kind of dance or gymnastics background. Some respondents also felt that various gymnastics activities had been helpful to them, for example, in moving in rhythm, mastering their own body when dancing, and designing choreographies.

> *"I've been doing team gymnastics for about eight years and also coached it for close to ten years, so improvising and creating choreographies is familiar."* (V14)

> *"My own gymnastics and athletics background was useful, especially when learning breakdance, because I have the strength and coordination skills for different positions that require balance on the floor."* (V24)

> *"I've been doing gymnastics since I was little, so dance and music movement are close to my heart."* (V27)

Based on the responses, school physical education has had an impact on the formation of current dance self-conception. For the most part, however, mentions of school physical education were about lack of dance or dance instruction being offered only to girls, yet some experiences had also been positive.

> *"When I was in primary school, music movement and dance was not considered something for boys, let alone men. Also, in school PE classes, I don't remember ever dancing, let alone moving with the help of music. My preparedness for the music and movement study module was, therefore, rather non-existent."* (V26)

> *"In middle school, in pair dance classes, I got a bit excited about pair dancing."* (V30)

> *"In elementary school, I don't remember having dance or music movement, but in middle school we had a prom every year around Valentine's Day. We practiced for the prom in PE lessons, and those lessons were nice. The dances became more difficult year by year, and they taught a sense of rhythm, different sets of movements, and also social skills and consideration of others."* (V31)

Research question 3

What is the readiness of the respondents (student teachers qualifying with a minor in physical education) to teach dance in the future?

Eleven respondents wrote that they felt ready to teach dance in school, and four respondents felt they would not be able to teach dance. Ten respondents were somewhat uncertain about their dance teaching skills, but several of them felt that with additional practice they would be able to teach dance in school.

> *"My readiness to teach dance is not very good. I'd have to practice quite a lot to know how to instruct dance. I'm sure you'd learn it by doing it, but you'd have to do a lot of work."* (V2)

> *"I would say I could plan music movement classes as well as carry them out."* (V6)

> *"Although I still don't feel like I get very much pleasure from dancing, I believe I could, for example, nicely lead a small dance class. Basic knowledge of different dance styles and how to direct them is enough to teach dance, your own dancing expression is a sideshow from the point of view of teaching."* (V8)

> *"Dancing and rhythm belong to everyone, and I intend in my own career as a physical education teacher to promote that perspective equally."* (V31)

The reflection in this section was missing from the responses of six respondents, so these responses went unaddressed. In general, many students wrote that they received from the music movement study module (in physical education minor studies) a lot of skills as well as the confidence and belief to be able to teach music movement and dance in elementary school.

> *"However, in my current minor music movement study module, I've learned to relate more naturally with my own dance skills, I've had the opportunity to try many different forms of dance and been able to change my attitude towards dance and be more relaxed when surrounded by others. I've also*

> *seen that you don't really need to stress that much about teaching dance, a teacher doesn't have to be a perfect dancer to teach it, and they can teach based on their own skills."* (V7)
>
> *"However, during my time in the minor studies in physical education, I encouraged myself to express myself through music, as well as dancing with others. Overall, I feel my own attitude towards music movement has become more positive after the music movement study module."* (V26)
>
> *"My dance self-conception has changed in a more positive direction thanks to the minor studies in physical education. I've had a lot of success experiences that will definitely help me in the future."* (V30)

Based on these results, dance performance conception and experience of self-efficacy to teach dance are not connected, as seven respondents whose dance performance conception was negative still felt that they could teach dance well or fairly well.

Reliability of Research and Ethical Solution

As Eskola and Suoranta note (1998), careful justification of the selection of the subject and background information increases the ethicality and reliability of the research. In this study, we strove to adhere to ethical solutions, from the choice of subject to reporting the research results. Students who participated in the study responded to an anonymous online questionnaire via a link shared by their teacher, so their identity was also unknown to the researchers. We have also omitted any information referring to age, domicile or other personal data from quotes and reporting.

Due to its qualitative nature, the study involves a lot of reflection and interpretation. As is characteristic of qualitative research, we constantly considered the reliability and scope of the research and analysis (Eskola & Suoranta, 1998). The responses we used as material for the study, written by the students themselves, were retained in their original form throughout the study. We strove for an objective interpretation of responses, reading through the responses several times and viewed from different angles and continuously going back to the original texts during the process of content analysis. However, it must be considered that these interpretations are made by the researchers and therefore may not be fully reproducible (Tuomi & Sarajärvi, 2002). The study confirms previous research findings on the effect of gender on dance attitudes. The results produced by the study are not entirely generalizable as the nature of the study is phenomenological-hermeneutic, aimed at explaining and understanding worlds of meaning rather than empirical generalizations (Patton, 2002; Laine, 2018). The study provides direction for further investigations.

Reflection and Conclusions

As mentioned previously, as the starting point of this study we consider the status or lack of dance as part of basic physical education. Although dance is not part of primary school art education, dance education has been shown to have positive effects on the everyday life of schoolchildren, problem-solving skills, and physical activity (Sansom, 2011; Anttila, 2013; Anttila et al., 2019). As a part of the content of physical education,

dance is taught according to the discretion and skills of the teacher (Siljamäki, 2007; Laakkonen, 2009; Anttila, 2013).

According to a dissertation study by New Zealand-based dance teacher, Suzanne Renner (2015), the self-conception of student teachers' dance teaching was influenced by their observations of their own dance skills, as well as their background. In this study, too, these findings are confirmed. The present study is based on the concept of self-conception, which is a more holistic concept than self-efficacy (Bong & Skaalvik, 2003). However, in our study, the dance self-conception section of our study also provides a reference to students' self-efficacy experiences in dance. Studies have shown that the teacher's own attitude towards the content being taught, as well as the sense of ability to teach that content, have a great impact on pupils' learning outcomes (Pajares, 2005; Woolfolk Hoy & Davis, 2005). Thus, the results also give an indication of how many study participants would likely teach dance in the future.

In this study, students' backgrounds and conceptions of their own dance skills had a strong impact on how they felt they were able to teach dance in the future. However, the male respondents, whose dance self-conception we interpreted as negative, felt that they could teach dance well or fairly well in the future. This study therefore makes it impossible to show that these considerations have a direct connection. This result may also be influenced by a generally strong sense of ability among individual student teachers regarding their teaching skills (Woolfolk Hoy & Davis, 2005) and, for example, positive student self-conception (Burns, 1982). The generally positive attitude of students to dance in this study may also be due to the timing of the survey, which was carried out soon after the conclusion of the music movement study module, when the contents were still in fresh memory.

Another notable study result was that gender had a big influence on dance self-conception. Dance-performing conception was negative in most men. The reason for this was cited, for the most part, as a lack of earlier dance practice due to gender prejudice. This result was not surprising, as the proportion of men and boys involved in dance is quite small (Löytönen, 2004; Lehikoinen, 2006; Risner, 2007; Anttila, 2013; Turpeinen, 2015). Interestingly, most women did not consider the effect of gender at all in their writings. In several of the men's responses, conversely, dance was referred to as a 'girls' thing', which, according to our interpretation, suggests that at some point in their lives the respondents had experienced dance in some way as feminine and as an inappropriate pastime for heterosexual men (see e.g. Risner, 2007). Most male respondents mentioned that as an adult, and especially after the music movement study module, their attitude towards dance had broadened. Based on their school experience, the respondents also reported that dance had been taught mostly only in physical education for girls. This refers to the discussion in recent years of gender stereotypes in physical education (see e.g. Berg, 2010). In our view, gender stereotypes related to dance would be easiest to break in primary school. This topic should be discussed more deeply in teacher education and in the design of educational content. Maybe this issue should be taken up in the teacher education curriculum planning where the importance of dance education as a part of music and physical education should be more underlined. Also, the discussion about the right to dance as well for boys as the girls could be more focused in a way which is not connected to sexual orientations of people.

Another big influence was, as expected, dance hobby background. Based on the results, it was clear that among those who had previously engaged in dance or dance elements, dance self-conception was positive. According to our observations, those who had previously dabbled in dance especially felt that moving in rhythm and reproducing finished choreographies were meaningful. Interestingly, those respondents also found creative dance based on improvisation and free-to-music movement uncomfortable. For their part, respondents who had not previously danced but whose dance self-conception was predominantly positive, felt creative dance was more meaningful than choreographies that required staying in rhythm. This was an interesting finding and an intriguing avenue for further research.

The survey revealed that well over half of respondents had a positive socio-emotional dance self-conception, six had a neutral socio-emotional dance self-conception, and only five had a negative socio-emotional dance self-conception. This is a significant result. The social and mental well-being effects of dance (Anttila et al., 2019) can also be observed among student teachers based on these results. These results may be attributed to the fact that the respondents were individuals who were generally interested in physical activity. It would be interesting to examine what results would be obtained by students who have completed, for example, the physical content of multidisciplinary studies alone.

There is clearly a need for further research. This could be conducted as quantitative or multi-method studies; in which case the sample could be larger. It would be interesting to explore the dance self-conception of class teacher students who do not have separate physical education studies. It would also be interesting to compare the dance self-conception or self-efficacy beliefs of teachers in employment and students still completing their studies. The main goal of the studies would be the development of dance content in teacher education programmes, as well as the mapping of material banks for physical education teachers and class teachers already in working life.

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A STUDY ON LATVIAN CHOIR CONDUCTORS' PROFESSIONAL EXPERIENCE IN THE ASPECT OF VOICE ERGONOMICS

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Abstract
Voice ergonomics considers the load issues and identifies physical and emotional factors that affect voice quality. Therefore, voice ergonomics can be studied in the aspect of a physical load as well as in cognitive and organisational aspects.
This study aims to explore the choir conductors' unique individual experience obtained in their professional work with choirs within the context of voice ergonomics.
This study was qualitative research, where data were obtained by individual semi-structured interviews. The research involved six well-known choir conductors with a long professional experience conducting professional and non-professional choirs of different ages and a broad pedagogical work experience in music. The method of thematic analysis was employed for analysing interview outcomes.
Interview answers were structured and analysed in such thematic fields as use of voice and a vocal load, vocal fatigue, body posture, knowledge and understanding about voice ergonomics, organisation of rehearsal processes, and room environment. Conclusion: the main factors affecting the quality of voice sounding were an increased vocal load, fatigue, stress, body posture and air quality of rooms.
Keywords: *voice ergonomics, choir conductors, vocal load, vocal fatigue, stress, physical ergonomics, cognitive ergonomics, organisational ergonomics*

Introduction

The length of a human's life and capacity to work has considerably increased, and one of the critical issues of contemporary society is how to maintain good health, quality of life and work as long as possible. The responsibility for the quality of daily and working life lies on a person himself/herself, and the employer's understanding of employees' work environment conditions and factors impacting health and abilities to work. Any profession and work have specific factors that influence their employees' comfort and health. The branch of science, called ergonomics, is concerned with studying and analysing a human being at work.

Research on voice ergonomics was started in the 70s the previous century. The interrelations between voice and a working environment have been studied within the context of specific professions, factors influencing the vocal load and improvement of working conditions (Rantala & Vilkman, 1999; Simberg et al., 2005; Ilomaki et al., 2008; Geneid et al., 2009; Holmqvist et al., 2013; Vertanen-Greis et al., 2020). The analysis of scientific literature in the field of voice ergonomics showed that there is a lack of studies about choral conductors. Some studies investigated vocal load in choir conductors (Rehder & Behlau, 2008; Geraldo & Fiorini, 2021). Furthermore, we did not find that these studies used the interview method to collect data.

The current study is a follow-up after the survey conducted in 2021, which analysed choir conductors' knowledge about voice ergonomics and risk factors of voice disorders (Trinite et al., 2021). The survey results provided a general outline of possible risks for conductors' voices but did not respond to how the voice ergonomics knowledge could be implemented in their working practice. Thus, the case study aimed to explore the choir conductors' unique individual experiences obtained in their professional work with choirs within the context of voice ergonomics.

The research problems were: (1) what factors of physical ergonomics do conductors face, and how do they affect their voices; (2) what is the role of psychosocial environment and voice ergonomic knowledge in conductors' professional life; (3) do organisation of rehearsals and physical environment of rehearsal rooms have an impact on conductors' voices.

Background

The term *ergonomics* was coined in the middle of the 19th century, and up to the present time in different fields, it is used most frequently concerning employees' working abilities and issues of labour safety in order to establish methods for maintaining employees' working abilities, improving their working conditions and labour productivity, as well as increasing work quality (Kaļķis, 2021). Ergonomics is a cross-branch science, which is frequently called the science of well-being and comfort, since its focus is a broad concept of health, embracing human's physical, mental and social health and its interaction with the environment.

The work environment observation from speaking, voice production, speech hearing and speech recognition aspects are studied by voice ergonomics, which is one of the fields of ergonomics and occupational health (Sala, Rantala & Simberg, 2019; Trinite et al., 2021). Knowledge about voice ergonomics and its daily use is essential for those who use voice as the main instrument of the work. Sala, Rantala & Simberg (2019) suggest using two terms – professional voice users (singers, actors) and occupational voice users (teachers, trainers, sales-persons). The voice itself is a message for professional voice users, an instrument whose sounding gives other people pleasure. However, for the occupational voice users, voice is an instrument conveying some message; it is a means of work and not the result. Choir conductors are between professional and occupational voice users since they simultaneously use speaking and singing voices during rehearsals. Ārijs Šķepasts, a Latvian conductor, singer and composer, considers that singing voice compensates what words cannot express. For example, the conductor first demonstrates the composition by voice and then explains his vision in words (Sarunas ar diriģentiem, 2022). Therefore, it gives good reason to consider that conductors represent speaking and singing voice professionals (Chitguppi et al., 2018).

Physical, cognitive, and organisational ergonomics study human functioning in a specific work environment (Kaļķis, 2021). Voice production is one of the activities necessary to carry out specific professional tasks; therefore, all these three aspects of ergonomics can be applied to the field of voice ergonomics.

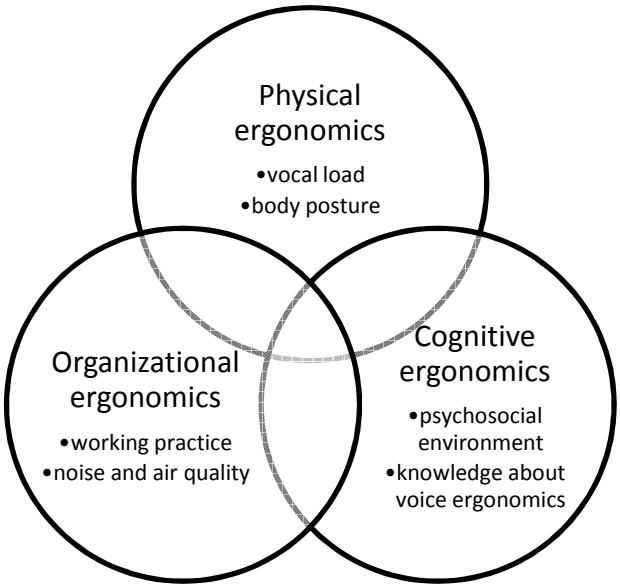

Figure 1. Types of voice ergonomics and its characteristics components

Physical ergonomics is about the human body's responses to physical work demands (Kaļķis, 2021). While fulfilling his/her job duties, the human's body adapts to specific working conditions, thereby loading substantial parts of the body and increasing the load of the functions related to this muscle-skeletal system.

Poor body posture and high vocal load during conducting are the factors that might contribute to losing the conductor's physical and psychological working abilities. The conductor's voice must be flexible; it must be like a well-tuned instrument. The transitions from speaking to singing take place many times during rehearsals. The spoken voice conveys instructions, explains style characteristics, and works on text pronunciation. The sung voice provides examples of different voice characteristics to the singers (Rehder & Behlau, 2008).

Moreover, to teach vocal parts to all voice groups in the choir, a conductor or a choirmaster demonstrates singing samples by the voice, switching between vocal registers, changing dynamics in the variation of loudness, and adapting different singing styles (Trinite et al., 2021). The choir conductors also improve diction and develop the ability to simultaneously form pitch and text in the given tessiture. A healthy voice is a necessary prerequisite to tolerate the multiformity of these vocal activities for a long time.

A physical load during conducting is related to body posture. The conductor's posture is his/her visiting card, and therefore it must be relaxed and at the same time also steady and stable. A conductor must have stable support on both feet, and the head must be held in a natural, free position with a look straight forward, without tensing cervical muscles (Lindenbergs, Baltiņš & Rasmanis, 2012; Marnauza & Bašs, 2012). Daley et al. (2020) consider that a critical element of a conductor's dynamic posture relates to the sense of sight. Head, shoulder, and upper body movements are constantly alternating

eye contact between an ensemble and a score. The score usually is positioned at a lower visual field, whereas the choir is at eye level or above (Daley et al., 2020). Alternately following singers and note materials, the conductor's body posture, including the position of a head, must be comfortable not to create tension in some muscular groups. The conductor's and singers' voice quality depends on body posture and head position during singing. The role of the body in voice production was studied by Vainio (2018), who collected the responses from teachers who completed the Voice Pilate course developing physical and mental associations between posture alignment and voice. The positive feedback from study participants confirmed that holistic awareness that voice is an integral part of the body improved vocal quality, at least at the level of subjective answers (Vainio, 2018). A conductor should take care also of singers whose dominant body positions during rehearsals or concerts are sitting or standing. Therefore, regular breaks with physical activities during rehearsals are highly recommendable for preventing singers' voices from fatigue or 'becoming squeezed'.

Prolonged, repetitive non-ergonomic postures negatively impact the body's muscular system (Daley et al., 2020). In addition, the tension in some parts of the body, such as shoulders or knees, leads to muscle imbalance. Thus, conductors may be susceptible to a musculoskeletal injury involving the back, neck and shoulders (Brandfonbrener, 1999; Smith & Sataloff, 2013). The vocal specialist and singer Zane Šmite maintains that for reaching a balanced vocal load, every singer must try to find one's best sound with the minimum of effort, effectively changing aerodynamic energy into the acoustic one (Šmite, 2020).

In the last decades, significant attention has been paid to the work environment's cognitive and psychosocial factors, including human knowledge, skills and competencies about workplace ergonomics, sociopsychological microclimate, and stress. Cognitive ergonomics analyses cognitive, psychological and behavioural processes during work (Kaļķis, 2021).

The conductor's professional duties are closely related to a tremendous mental load and involve various cognitive processes. Conducting is based on inner, intellectual processes. The voice is one of the conductor's work tools; another is the singers. Singing is the principal choir's working form, and it takes place during rehearsals and concert performances. Consequently, the conductor should have professional knowledge about vocal training, a good ear for music (melodic, harmonic, intonational, and timbral), a good memory, attention and ability to concentrate (Marnauza & Bašs, 2012). The conductor's activity at rehearsals and concerts is multi-modal. The conductor leads the singers by gestures, body and head movements, eyesight and facial expressions, and simultaneously the conductor has to follow the melody, rhythm, tempo and expressive intensity of the composition, the vocal balance and message of a musical piece (Ashley, 2000; Poggi & Ansani, 2017). Besides, conductors, like all other musicians and artists, must be competent in diverse styles of music and esthetics, which are an inseparable part of revealing the artistic content (Znutiņš, 2004; Lindenbergs, Baltiņš & Rasmanis, 2012; Batņa, 2015). The inability to manage and organise this great psychoemotional load can impact the voice quality. Stress increases the number of vocal symptoms and creates a risk of vocal disorders (Holmqvist et al., 2013; Vertanen-Greis et al., 2020).

Human health is tightly related to general well-being, which can be influenced by the internal sociopsychological microclimate of the choir and the conductor's communication with choral singers during rehearsals (discipline, mutual understanding, and general atmosphere). An outstanding and artistically emotional experience during

the performance depends not only on a perfectly prepared composition but also on mutual relationships between singers at the rehearsals. Daily engaging activities (e.g., informal gatherings) involving all singers enhance a positive atmosphere in the choir and create more cohesive singing in a concert.

Cognitive ergonomics includes the conductor's knowledge about voice ergonomics and applying this knowledge in daily practice. A conductor is the artistic leader of the choir, an authority, adviser, and inspirer. Comprehensive knowledge about voice ergonomics combined with an empiric conductor's experience raises awareness about the necessity of using this knowledge in practice. The observation of the effectiveness of ergonomic strategies in practice demonstrates that a definite action produces a definite result. The improving voice quality strengthens motivation to continue following voice ergonomics rules and transform healthy voice use as a habit. Moreover, if a conductor is convinced that these recommendations are effective, he/she will actively introduce them to singers. In some respect, a conductor is responsible for the quality of his/her own voice and singers' voices.

Organisational ergonomics refers to providing harmonised work environment. This issue is attributable to conductors because they are leaders of a choir who have to deal with artistic choices and organisational challenges. In addition, organisational ergonomics involves working practice during rehearsals and concerts and noise and air quality issues in the rehearsal or performance rooms.

The results of the conductors' survey about voice ergonomics demonstrated that quite often, choir conductors have more than one rehearsal a day, especially in cases when they are conductors of several choirs or work as music teachers in some educational institutions (Trinite et al., 2021). The schedule of rehearsals must be carefully planned and breaks between rehearsals should be provided to avoid voice overloading. Short pauses providing vocal rest should be envisaged during rehearsals. Overuse of voice caused by an intensive schedule of rehearsals neglecting vocal rest can impact the larynx's tissues and result in vocal fatigue. A voice user needs some time to recover the voice after the vocal load. According to Hunter and Titze (2009), after two hours of vocal loading, a 50% recovery occurred within 4–6 hours; 90 per cent recovery occurred within 12–18 hours. A conductor is supposed to take care of singers' voices and, therefore, must proportionate singers' vocal load to the duration and number of rehearsals and concerts while considering the age of singers (Batņa, 2015). When planning rehearsals, the conductor must carefully weigh up all methodological techniques that can be applied to achieve the desired outcome and singers' voices would not be overloaded.

Choir rehearsals and concerts are organised in rooms of different sizes and acoustics. Therefore, assessing rehearsal rooms from the point of voice ergonomics is necessary. The survey data show that the quality of the air in the rehearsal rooms rather than the noise affects the conductor's voice quality most of all (Trinite et al., 2021). Good indoor air quality is characterised by the right room temperature, proper relative humidity, cleanness and freshness (Sala & Rantala, 2019a). In addition, dry air and insufficient hydration affect the vocal folds' mucosa, causing changes in the vocal folds' vibrational quality and promoting a vocal overloading and consequent vocal fatigue (Geneid et al., 2009). The air quality issue in rehearsal rooms was highlighted during the coronavirus disease (COVID-19) pandemic since it became known that indoors this virus spreads as drops. As a result, conductors were recommended to organise rehearsals out-of-doors or, if possible, keep doors and windows open during the rehearsal and install effective

ventilation systems in these rooms (Naunheim et al., 2021). However, working under such conditions, cold and draught pose a significant risk to the vocal health since they create muscular tension in the body. Therefore, conductors have to think about clothing suitable for the conditions under which the rehearsals are held and about breaks and loudness of voice during rehearsals.

The room acoustics plays an essential role in the general sounding of the choir. Reverberation time is one of the parameters characterising the acoustic properties of rehearsal and performance spaces. According to the Norwegian standard, the reverberation time in rehearsal rooms and performance halls must differ depending on room volume (Norwegian Standard, 2014). Noises unrelated to the artistic process would be unwelcome in rooms where rehearsals are held since the increase in background noises increases the intensity of the conductor's voice and causes discomfort (Sala & Rantala, 2019b). At rehearsals, the activity noise most often is caused by singers' chatting. During rehearsals, the activity noise might be related to the choir's internal discipline or working culture and the lack of interest and attention. Therefore, a conductor has to carefully think over the work organisation at rehearsal so that all the singers would be interested and involved in the process.

Research Method and Sample

This was a qualitative study where the primary data gathering method was semi-structured individual interviews. The interview is an interaction-based personal dialogue between a researcher and a research subject, allowing obtaining information about the reflection of theoretical findings in real life. Moreover, the 'strength of alive word' allows the researcher to clarify previously unknown aspects of the researched problem and understand the nature of the problem under research.

The interview included the following predetermined question blocks:

- Demographic data (respondent's education and conductor's and singer's work experience);
- The role of voice in conductor's work;
- Vocal load and factors affecting it;
- Knowledge about voice ergonomics and use of this knowledge;
- Physical and psychoemotional work environment.

The interviewer was allowed to change the order of questions depending on the situation during the interview. These were remote-organised interviews using the ZOOM platform. The average time allotted for the interview was an hour and a half. The audio recording was made during the interview, and its transcript was made after the interview.

The method of thematic analysis was used for the analysis of the interview content. A modified thematic analysis model (Braun & Clarke, 2006) was applied to analyse the obtained data. The first step was familiarisation with transcripts of interviews. Then, due to the relatively small amount of data, the coding and themes generating steps were merged in one. The themes were generated on the basis of the theory about three types of voice ergonomics – physical, cognitive and organisational. Then authors provided a careful review of generated themes by organising the data. Finally, the organised and selected data were complied, and themes were defined and named.

The criteria for the participants' selection were:

- A long experience of professional work with different choirs (children, adults, professional, non-professional);
- High recognition of professional activity at a national and international level;
- Involvement in teaching music in education institutions.

Six leading internationally recognised and experienced Latvian choir conductors were invited to participate in the study. The conductors were with a deep desire to self-educate and devote themselves to choral and vocal art, and all of the invited conductors were involved in maintaining the tradition of the Song Festival. Two of the participants also were composers and arrangers, well-known in the circle of conductors; one of the participants was a conductor of a professional choir and symphonic orchestra. All the respondents taught music in schools, colleges or universities. They were males, 36–60 years old. Table 1 shows respondents' educational and professional experience. All the participants had experience of conducting joint choirs (forged of many choirs) at the Song Festival.

Table 1. Educational and professional experience of respondents

Respondent	Education (highest level)	Professional experience (years)	Choirs				
			Children	Youth	Adult	Joint	Other
R1	Master's degree in choir conducting	>20	+	+	+	+	Mixed choir of people with visual impairments
R2	Master's degree in choir conducting Master's degree in symphonic orchestra conducting	>20	+	+	+	+	Professional choir
R3	Doctoral degree in pedagogy	17	+	+	+	+	
R4	Master's degree in choir conducting	>30	+	+	+	+	
R5	Master's degree in choir conducting	>20	+	+	+	+	
R6	Master's degree in choir conducting	42	+	+	+	+	Seniors' choir

The Ethical Committee for Clinical Research of the P. Stradins Clinical University Hospital (Riga, Latvia) approved the study (No. 171220-10L). All participants gave informed consent to participate in the study and were informed about the publication of their answers.

Results

A. Factors of physical ergonomics

Vocal load

The data analysis showed that all respondents acknowledged that voice plays a significant role in conductors' professional work. Respondent R3 considered that in most cases, the conductor's voice is a decisive factor for achieving a qualitative artistic performance of the choir, especially when working with children's choirs. Interviewee R5 said: *"No verbal explanation will ever be able to replace an emotional example given by voice. [..]The conductor has to demonstrate an example – to sing it emotionally and touchingly so that the singers could perceive it. If a conductor has a good voice, musical feeling and sings well, the choir also will sound well".*

Respondents agreed that the voice is most involved in demonstrating examples for amateur choirs, mainly when the score is acquired in parts. The conductor has to demonstrate pronunciation, way of how the music of the respective epoch or style should be performed, how to do it vocally correctly and with what kind of sound articulation (*legato, non-legato or marcato*), how to reveal dynamic, culminating, emotional and content facets of the specific composition. All respondents admitted that they teach the music material to the choir basically by using their voice. For instance: *"I demonstrate a lot. Practically, I show everything by my voice. [..] This is the fastest way to show the pronunciation and how the respective music should be performed. [..] If I ask something from the singers, I think whether I can do it. I never ask things I cannot do"* (R2).

All respondents concurred that the singing voice is used less when working with professional choir singers. However, some artistic nuances always emerge that need the conductor's demonstration, so the singers should understand the conductor's wishes. Several respondents noted that the use of the conductor's voice might depend on the staff of the professional choir and its changeability: *"Creative potential of singers' voice is very high, but the speed of how they learn the material is extremely diverse, and therefore this requires much hard work. The conductor has to work with a choir and with a group of choir singers, has to work individually and with the new singers"* (R4).

Another respondent noted that *"professional choirs also need working on their vocal so that the sounding of the ensemble would comply with conductor's wishes. Time and work required to achieve a good sounding of an ensemble are tremendous"* (R4).

The respondents shared observations that some conductors use their speaking voice more often for describing musical ideas by figurative narratives, stimulating singers' imagination. The interviewees admitted that they also use the method mentioned above, although a more effective and quicker way to achieve the choir's desired sounding is the demonstration by one's voice.

Based on the previous studies (Smith & Sataloff, 2013; Trinite et al., 2021), we concluded that the conductor's vocal load should be discussed within the context of his/her general physical and mental load. The obtained data testified that respondents' mean vocal load per day has been different – within the range of two (R5) to eight hours (A2). For example, one of the respondents (R3) described his/her working day as follows: "*My day begins at 8 a.m. [...] with choir lessons, and then I teach other subjects. There is a school choir from 2 p.m. to 4.30 p.m. [...]. Every evening from 6.30 to 9.30 I also*

have rehearsals with the choirs. The schedule shows that I finish active singing and speaking at about 10 p.m. and the next morning at 8 a.m. Then, I begin it again".

Since in Latvia, all conductors are participating in maintaining and developing the World Non-material Cultural Heritage phenomenon – the tradition of Song Festival, many conductors, including research participants, are involved in joint choir rehearsals with a vast number of singers. The obtained data showed that chief conductors admitted that just at the rehearsals of joint school choirs, they experienced an increased vocal load and vocal fatigue after them.

The interviews with the conductors were carried out when due to the COVID-19 pandemic in Latvia, strict assemblage restrictions were introduced, and choir rehearsals could no longer take place in presence. In their answers, the conductors maintained that the process of remote rehearsals had increased their vocal load: *"If previously (before the pandemic) we had rehearsals once a week, then now each day has its lesson schedule when we have to work with singers. This is a very heavy load, which I would not have been able to bear if I did not have the experience of many-year-long physical training"* (R2). The interviews also provided contrary opinions when the conductors stated that due to the initial restrictions of the epidemic situation, the long-established regime of the use of voice, enabling to keep a voice in a 'good form', was deranged. As a result, irregular use of voice has changed its quality (R1, R3).

Vocal fatigue

The indicator of vocal overload is vocal fatigue which reduces the vocal load endurance and the ability to control voice loudness and pitch. The respondents admitted that a fatigued, hoarse, or aphonic conductor's voice impacts the general sounding of a choir, especially in cases if amateur choir singers are in the habit of copying or imitating their conductor's voice. In addition, unlike the position of a choral or solo singer, where singers usually perform compositions in a range suitable for them and think basically about the quality of their voice, then working with the choir, conductors often demonstrate singing in tessituras that do not correspond to the range of their voice. Moreover, if the choral singer's voice may have a short rest while other parts are rehearsed, the conductor's voice participates in the rehearsal almost without any break and keeps switching from one diapason to another, speaking and singing voices interchanging. In the answers, respondents mentioned the possible reasons causing vocal fatigue: a forced sound, singing high register sounds, a prolonged singing on transitional notes, repeated demonstrations of an ideal sound variant, too high requirements to technical or artistic performance. Several respondents admitted that most frequently, vocal fatigue develops at the initial stage of learning the artistic program: *"Voice gets tired during the process of rehearsals when we work with different groups of voices. At the beginning of learning the program, voice is used more frequently, but later less and less until the choir guesses everything from conductor's hands and eyes"* (R1).

Some conductors associated vocal fatigue with remote rehearsals. They considered that prolonged singing at the screen provoked vocal overload. Conductor (R5) said: *"Under the present conditions, I feel vocal fatigue much more, since I have to sing parts for choral singers in audio so that they would be able to learn them remotely, or I have a rehearsal with young people in ZOOM platform where I sing for them hoping that they also sing and learn together with me. I prepare recordings for the choir, but I feel that after singing more than an hour and a half, my 'voice ends', there appear until unprecedented defects,*

heaviness, the tension in vocal folds, and I feel bad before the singers because I suddenly cannot demonstrate what I would like to show".

In another answer, a conductor revealed the principal vocal fatigue reasons caused by the process of remote rehearsals – increased vocal load, singing with each singer individually and singing in a soft voice not to disturb one's family and neighbours.

Body posture

In the context of sustaining working abilities, conductors emphasised the significance of physical training (R2, R4, and R6). They noted that the sounding of a song and its emotional fullness is reflected in the conductors' posture and gestures. Movements of the conductor's body mobilise singers to achieve the best sounding: *"Physical posture certainly influences conductor's voice. I am a very emotional and expressive conductor, actively using gestures and facial expressions. When I conduct, I also want to experience catharsis, to be inside the whole process. To my mind, this also helps my singers to open out emotionally, to evoke a response in themselves, and their voices become more sonorously. If there stands an unemotional conductor in front of the choir and only wastes time, choir's response would be 40% lesser"* (R4); *"If I stand erect, my energy grows; if I stoop, I have less energy"* (R6).

B. Factors of cognitive ergonomics

Psychosocial environment

The conductor's leading position and responsibility for singers include a significant mental load. Therefore, the conductor should work on character traits that motivate him/her to succeed. These traits are courage, confidence, attention, diligence, equability, mood stability, self-discipline, will. Such character traits contribute to developing the proper habits and achieving the desired target. The interviews showed that all conductors had the qualities necessary for an artist. For instance: *"I consider that a conductor is the one who manages energies. First, the conductor must get energy out of the singers and then must be able to manage it. It is much more difficult for chief conductors in conducting a big joint choir. The exchange of energies is easier if singers know songs by heart"* (R4). Another example: *"The conductor is the most important person, he/she must take responsibility, but he must enjoy this weight of responsibility. I believe that we can only create joy ourselves"* (R4).

Conductors are artists who are emotionally involved in the process of interpreting compositions. During the interview, the conductor asked rhetorically: *"Can anyone measure conductors' emotionality, can anyone measure emotional experiences, how much any of us feels for others, does a greater emotional experience mean greater vocal load?"* (R5).

We found that conductors' answers to the questions related to stress were quite similar to those received by the survey. The answers demonstrated a clear association between stress and voice problems (Trinite et al., 2021). People experience stress when they no longer can cope with their job duties and lose control of the situation. Excessive stress may impact physical and mental health.

The analysis of interviews showed that conductors were aware of the role of emotionality in singing and the impact of the emotional state on voice quality: *"Singing is emotionality, it is a language, and if it is a language, you want to say something. If you feel relaxed and emotionally open and positive, the body helps you feel less tired. To lessen the*

emotional depression, I tell the singers: "These are three hours of joy you must not steal from others, but sooner create them yourself. You must always be the Sun! The moon is beautiful at night, but it would never shine without the sun" (R4).

Many conductors considered that a choir and a conductor work like one organism, and negative emotions, stress, gloomy mood are conveyed from the conductor to singers and vice versa. Conductor R3 said: *"My voice gets affected when I feel that the choir is angry or dissatisfied with me".* Conductors also mentioned positive examples when the rehearsal generated positive energy: *"Sometimes, at the beginning of the rehearsal it seems that I am emotionally tired and I tell it to my singers, but then during the rehearsal, you feel that the exchange of energy is taking place and you get emotionally loaded and can give the energy back to your singers again"* (R4).

During rehearsals, the singing effort should be balanced with the singers' abilities to perform the specific piece to avoid excessive psychoemotional load. Conductors stated that it is their responsibility to maintain a positive atmosphere during rehearsals and concerts: *"Conductor himself/herself must radiate positive energy and be active. If a conductor is depressive, it will impact the singers, their comfort, and a vocal load and singing comfort. I wish my singers inform me before the rehearsal if they have some health or emotional problems, then during the rehearsal, I know that I must not disturb them and I am glad that they have been able to attend the rehearsal"* (R40).

Voice ergonomics knowledge

There were specific questions in the interview about knowledge of voice ergonomics and implementation of the theoretical knowledge in working practice. For example, one of the interview questions was: *How do you interpret the concept of 'voice ergonomics'?* Answers we received were of both the emotional and rational type: *"The first thing I associate voice ergonomics with is the ability to sing eternally. The voice ergonomics is my singing comfort when I could sing the whole day from morning till evening, and I would not feel I am singing"* (R1); *"Ergonomics – it might be something related to a rational use of voice"* (R2); *"A correct use of voice, ensuring of its sustainability, distribution of a vocal load"* (R3); *"Voice ergonomics – to use as little energy as possible to achieve a better effect"* (R6).

Over time, the terminology has changed, and the term 'voice hygiene' has been replaced by a more comprehensive term 'voice ergonomics'. The conductors emphasised that the issues of taking care of voice have always been included in the professional education programs for conductors. All of them agreed on the necessity to continue this tradition. Conductor R4 stated: *"To my mind, the issue of voice ergonomics should be included in any study program related to a vocal art; anyone whose working tool is voice should know it. The conductors, music teachers, musicologists, and composition study programmes should include this knowledge in the curriculum. Debatable is whether this content would be considered a separate study course or be part of some other course. Practical knowledge of ergonomics would be useful for the students studying in the study programs mentioned above. If you are a professional you must know and understand what interferes with and hinders your own and your singers' voice"* (R4).

C. Organisational ergonomics

Working practice: The organisation of rehearsals

The conductor's ability to motivate singers and tune them to rehearsal is an essential element of rehearsal organisation. It is related to the discipline during rehearsals and, as a result, impacts the conductor and singers' vocal load (R6). There is a correlation between organisational processes during rehearsal and the loudness of the conductor's voice (Trinite et al., 2021). If singers are not involved in work during the rehearsal, they create activity noise, making a conductor speak louder and cause additional stress. During the interview, the conductors shared their experience: *"I always find a way how to involve the choir group not singing at that moment in work; I make them learn by heart the text of the next song, not a single moment must a choral singer feel unnecessary, they must always be involved in work. [...] While some are patiently rehearsing a complicated part in a composition, the rest must think good thoughts so that this complicated part be a success. We, as a choir, are a single organism. Every chorister must respect people with whom they sing together; otherwise, nothing productive could come out of it, and such a chorister has no place in the organism of a choir. Talking during a rehearsal shows disrespects to music. It is the opposite of our mission because we create music and serve it. Therefore, there is nothing to do in the choir for people demonstrating such behaviour. The deliberate involvement of each singer is important"* (R4).

The conductor's leadership qualities are beneficial at organising rehearsals. A conductor must be able to *"maintain discipline in a collective, [...] – with good management, a word said louder, with a more interesting repertoire"* (R5). Working with children's choirs is a challenge for any conductor, especially when working with joint choirs preparing for Song Festival concerts. In 2015, more than almost 13 thousand singers from 328 choirs participated in the Latvian School Youth Song and Dance Festival. The differences in choirs' internal culture and discipline are visible when the conductor works with a joint choir. Conductors admitted that sometimes, discipline becomes uncontrollable during rehearsal, and only the conductor's creativity or enthusiasm can help cope with it (R3, R4). In addition, after such rehearsals, a chief conductor has often lost his/her voice: *"It is not easy to work with 50 boys. While the conductor works with one group, the other begins to buzz. If the conductor is not aware of a pedagogical method to call singers to order, he/she has to raise his/her voice, and the activity noise grows. Working in this way, a conductor gets tired, and the voice becomes strained and tired. Only outstanding teachers can work with boys' choirs!"* (R6).

An equal distribution of a vocal load during rehearsals contributes to ensuring the sustainability of a conductor's and singers' voice: *"A conductor must plan an equal vocal load and envisage short breaks for rest at rehearsals. The conductor should know voice relaxing exercises that can be used after singing at the very high or very low vocal range. At rehearsals before concerts, it is not necessary to sing the whole program through because it is a too heavy load on singers' voices, and they still have a two-part concert to endure and sing"* (R3).

A physical environment of rehearsal rooms: Noise and air quality

The obtained data demonstrated that conductors noticed and fixed all interfering outside environmental factors that might impact vocal health. However, the important observation was that achieving artistic aims was a priority for them, and all their attention was primarily focused on it. When conductors were asked about different factors related to the indoor environment of the rehearsals room, most of them

emphasised room acoustics. They stated that the acoustics and location of the choir in the room are of great importance: *"I always carefully chose the place where the choir will be located, on the stage or platforms. Acoustics is of enormous importance. The room may help singing and may also ruin it completely. In rooms with bad acoustics, singers must learn to subject rooms to their own needs"* (R4).

Interesting was the answer given by conductor R6: *"Most of all I dislike working in a room with excellent acoustics, I cannot normally work in it. What does such acoustics do? It seems easy for the singers to sing in it, cord harmonies develop easily, but the conductor does not understand the singers' contribution to this. Furthermore, when you find yourself in a room with different acoustics, you do not understand what to do or how to achieve the choir's sonority. […] I always tell my singers that any room is suitable for singing and can be filled. The better the room sounds, the less effort is needed; the worse acoustics in the room is, the more you must strain your voice. [...] However, the choristers must be able to sing in any environment, not only in the halls where acoustics is like in a church".*

Answering the questions about the quality of air in rehearsal rooms, almost all conductors underlined the necessity to have fresh air, since *"as soon as the room has insufficient air, singers immediately feel drowsy, and in the result, there is lack of maximal emotionality and physical response for a qualitative rehearsal" (R4).* However, the interviews with conductors showed that rehearsal rooms not always were adequate for singing. Thus, for example, at characterising rehearsal rooms in a historical building, conductor R4 says: *"Rehearsals took place in the room on the ground floor, with no ventilation. As a result, we could not take in more than 40 choristers since there was not enough air to breathe, and sometimes people used to faint during rehearsals. We tried to solve it by opening the outer door and making several attempts to hold rehearsals in another room where windows could be opened".*

Sometimes, a challenge to the voice of singers and a conductor was posed by the necessity to sing out-of-doors at public events. Conductors shared their experience, saying: *"Long rehearsals held outside are harmful to voice both in cold and hot weather"* (R3). *"Rain, wind and storm do not affect me; they sooner 'enhance taste and sharpness' to the phenomenon of joint singing. When we perform outdoors, I always remind my singers that they should bear in mind the feeling we usually have in our rehearsal room. The choir must not yield to the 'outdoor' feeling; the choir's sounding will 'go to pieces' then. While singing, the choir must be like a single bright star which keeps tightly together to fill the space around, not trying to achieve results by singing louder"* (R4).

Conclusions

This study aimed to explore the choir conductor's unique individual experience of professional work with a choir, thereby getting more detailed information about the practical implementation of voice ergonomics. The conductor's voice ergonomics issues were discussed from physical, cognitive, and organisational ergonomics perspectives. The study allowed a deeper insight into the conductors' profession. Open questions during interviews allowed the interviewees to express their opinions freely. It was essential for us because we analysed survey data in previous studies, which gave essential but limited information.

In summary, as expected, choir conductors mentioned the same risk factors of voice disorders, which were revealed in the previous questionnaire survey (Trinite et al., 2021). A high vocal load, fatigue, stress, body posture, air quality in rooms – these are

factors affecting vocal health in choir conductors. The interviews enabled us to discover the origins of vocal health impacting factors.

Respondents' answers demonstrated both rational and emotional explanations of voice ergonomics issues. For example, the vocal load is related to the intensity and duration of rehearsals and the complexity of acquired musical material. On the other hand, there is a vocal load related to fulfilling the conductors' artistic requirements and requires a specific psychoemotional affective condition of both conductors and singers. Therefore, vocal fatigue is more related to stress.

In the interviews, conductors also revealed those speaking and singing voice activities that are characteristic of them during the rehearsals with choirs, consisting of singers of different ages and having different professional training. All of the conductors had an opinion about working under the COVID-19 restrictions. They emphasised that changes in the usual organisation of rehearsals had influenced the vocal health and voice quality. Surprisingly, the interview answers showed two opposite experiences. The first, as choir rehearsals had been organised remotely for a long time by ZOOM, conductors' vocal load considerably increased. During the remote rehearsals when conductors worked from home, two approaches were used: prolonged singing in a full voice and demonstrating this singing on the screen, or, on the contrary, singing in a soft voice, because it was required by specific conditions (family in the next room or neighbours). The second, cancelled rehearsals and concerts created a situation when a voice was not used 'as previous' and was not 'kept in the form', and therefore when the rehearsals were resumed, a voice had lost its training and endurance, caused fatigue and exhaustion.

An essential conclusion was made based on interview data concerning the interaction between the artistic process and the rehearsal room environment. Although the conductors detect environmental factors such as acoustics, air quality, and in-door noise, the artistic and psychoemotional factors are priorities.

The conductors' initiative and motivation to promote voice ergonomic activities at the choir rehearsals and performances is tightly related to their attitude, knowledge and awareness. However, the conductor's personal example has a major significance. If the conductor highly values the importance of voice quality and is aware of voice fragility, he/she will teach the attitude to take care of the voice to singers. The choir sounding reflects the conductor's personal and professional attitude. Paraphrasing words said by one of the research participants (R5), we may conclude: *"A conductor serves to music. He/she is encouraged by greater things – to make the world more magnificent".*

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