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The Scope of Children's Listening: Sounds and Images for Auditory Education

Through Cooperative Learning Strategies

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RESUMEN

En este artículo realizamos una puesta en valor de la escucha, como una dimensión principal de la educación musical infantil, para el desarrollo integral del niño y niña. De este modo consideramos la importancia de la atención, de la escucha activa, también en procesos comunicativos y de conocimiento del entorno sonoro; así como la necesidad de la escucha activa en la audición musical, para la recepción musical, además de sus vinculaciones con el conocimiento y recepción de otras formas artísticas y del lenguaje, como se refleja en la legislación educativa vigente. Seguidamente, plantearemos los beneficios del aprendizaje cooperativo para el desarrollo de la escucha, dentro de las habilidades comunicativas necesarias para el trabajo en equipo, valorando las posibilidades de adaptación de esta metodología activa en Educación Infantil. En el último apartado expondremos distintos recursos y actividades, considerando la imagen y los formatos audiovisuales para el trabajo de experimentación y discriminación sonora por parte del profesorado de educación infantil en formación. En este punto, realizaremos propuestas de adaptación de una selección de dinámicas y técnicas cooperativas para educación musical, de manera que las estructuras cooperativas favorezcan el desarrollo de habilidades de trabajo en equipo, mientras se valora positivamente la escucha, también durante el aprendizaje del alumnado universitario, en la implementación de esta metodología que, según nuestra experiencia docente, es posible adaptar en distintos niveles educativos.

ABSTRACT

In this article, I evaluate listening as a core dimension of childhood music education for the all-round development of the child. I consider the importance of attention and active listening in processes for both communication and understanding the listening environment, the need to listen to music proactively for musical understanding, as well as their connections with knowledge and interpretation of other art forms and language, as reflected in existing educational legislation. Next, I present the benefits of cooperative learning for listening development as part of the communication skills needed for teamwork, evaluating the scope to adjust this active methodology in children's education. In the final section, I set out various resources and activities, considering image and audiovisual formats for trainee teachers in children's education when experimenting with and differentiating sounds. On this point, I make adaptive proposals for a selection of cooperative techniques and dynamics for music education, such that the cooperative structures favour the development of teamwork skills while listening is positively assessed (in university students' learning too) in the implementation of this methodology that my teaching experience has shown can be adapted to different educational levels.

The importance of auditory development and listening in early childhood education: introduction and theoretical basis

In music education, we refer to the auditory development of students as the starting point of the teaching-learning process, as it encompasses conscious listening or attention on the part of students, which is the basis of any learning in the classroom (Díaz González, 2017). Similarly, as Maravillas Díaz-Gómez (2005), among other authors, has pointed out, musical activity is an optimal means for hearing development in children's all-round development. Likewise, the importance of listening for musical understanding is key in the sensitisation and openness of the individual towards the world of music and sound. To this end, enquiry into the sound potential of children's environment is promoted at an early age, also based on their opportunities to produce sounds, for example through free play (Ciurana & Alsina, 2019). Perceiving and identifying the qualities of the sound environment becomes a pathway to musical appreciation, bearing in mind that, at around age seven, with the transition to the concrete operational phase of cognitive development, we can refer to the development of a child's aesthetic appreciation of music while gradually integrating the use of conventional musical writing signs in learning (Lacárcel, 1995).

From an early age, auditory development can be considered sensory training that allows children to enhance their intellectual development. This is part of a cognitive process supported by experience and memory that facilitates the internalisation, interpretation and understanding of the auditory experience through the recognition of the qualities of sound objects, and with the purpose of recreating meaningful structures that allow them to "relive the experience" (Alsina, 2002, p. 102). This is connected with the shaping of the collective sound imagination, insofar as human beings are able to recall sensations, concepts or visual representations through sound. As I noted above, sensory perception, along with hearing, allows the individual to identify sound elements and recognise what is happening around them while encoding a series of signs.

In this regard, the cognitive processes involved in auditory education – in terms of the meaningful articulation of elements and symbolic construction based on memory processes – are joined by a social praxis that is equivalent to "the set of meaningful everyday practices in which subjects performatively reproduce the wide-ranging memories of the culture" (Ricaurte, 2014, in Romero-Moreno & Palmett, 2015, p. 35). In this sense, the formation of the collective sound imagination enables representations of reality, which imply being able to intervene in the world and reproduce actions that sonically identify objects and spaces. Thus, the formation of the collective sound imagination would enable the individual to participate in a permanent social construction, guided by one's own collective life and previous cultural practices; thus, according to some authors, the latter will in turn determine the shaping of the collective sound imagination (Romero-Moreno & Palmett, 2015).

These approaches should be taken into account in early childhood music education, in parallel with the development of toddlers' confidence, autonomy and initiative, in line with

Erikson's psychosocial phases, among other aspects of psychosocial theory referred to by Felipe and Manuel Gertrudix (2011). It is no surprise that various authors defend the progression of learning in music education, from auditory development – which, in short, goes through perception and auditory discrimination – to memorising and then reproducing sounds and music using various means, such as the body itself, sound objects, musical instruments and the voice (Cremades, 2017).

Botella-Nicolás and Peiró-Esteve (2018) provide an interesting overview of studies that highlight the value of auditory stimulation at an early age for developing attention, concentration or memory; auditory perception is "one of the ideal skills to stimulate [...], by means of sound differentiation, as it is one of the first skills that begin to be acquired in early childhood, even before birth" (p. 3). In this sense, I consider auditory perception in direct relation to listening, as a conscious psychological attitude that involves voluntarily selecting some sound stimuli and discarding others. The first thing, then, is to learn to listen if sound, like gesture or image, is a means of access to any learning. Auditory discrimination also involves identifying sounds and sound parameters, which is what our auditory memory registers after recognising the sound characteristics.

Thus, at this point, the sensory listening phase noted by Sanuy (1996) is overcome by means of perceptual and also expressive implications, both for listening and for interpretation as sound and musical reproduction. In this way, progress is made from a sensory stage of physical or motor response to any sound stimulus. In early childhood education, pupils are encouraged to explore sounds and the sources of sound production. It is with good reason that the perception and identification of the qualities of sound become a bridge to musical appreciation and, later on, to the analysis of elements of musical works. According to Willems (2001), a child's aural preparation is of particular importance, as it allows the child to approach all kinds of musical elements. All this also connects with active listening as proposed by Wuytack (1998), as pupils cannot respond to a sound and musical event without paying attention. Similarly, Pascual Mejía (2006) considers how listening at an elementary level must be active for children to differentiate between basic musical parameters, such as rhythms, accents, melodies or timbres. As the author explains, it is important to make it easier for pupils to experiment with sound while awakening their interest in reproducing sounds, familiarising them with the melodic field, developing their auditory memory, and calling upon their auditory imagination so that the latter is stimulated. This enables children to create and improvise, while the teacher enhances their sensory, affective and mental awareness of the world of sound.

Let us now consider how the enjoyment of music will also depend on auditory perception, if we understand this to be the ability to compare sound events organised in time, both consciously and unconsciously. This connects with other phases of hearing development mentioned by Sanuy (1996), from sensitive to analytical listening, or from the descriptive plane referred to by Wuytack to the musical plane, finally recognising different sound and musi-

cal parameters. In these processes, it would be important to generate listening habits in children, or the habit of conscious listening, while teaching them to listen by listening. It is with good reason that the current regional regulations propose, in the basic knowledge of the area of Communication and Representation of Reality, the "understanding of the world and messages through active listening" (Decree 56/2022, of 5th August, Government of the Principality of Asturias, p. 26). All this will also help to increase pupils' curiosity towards new sounds and musical phenomena, and their willingness to remember listening experiences.

Thus, the ear should regain its status in a culture that is today fundamentally visual to balance the sensitivity and participation of the senses, as defined by Palacios (1993). This question will be important for developing pupils' aesthetic-musical sense while encouraging them, over time, to approach different sound manifestations and expressions and musical styles, with the aim of enriching their musical artistic baggage in a process that should begin at the toddler stage, as current educational regulations indicate.

This said, it is also important to transmit healthy habits to pupils in terms of hearing and ear care, also taking into account the widely studied harmful effects that noise pollution has on health, both on a physical and a psychological level, also in relation to children. Toddlers must discover the sound environment around them, being sensitive to the effects of noise pollution, if we follow Schafer's (2013) ideas about ear cleaning or the differentiation of soundscapes with different sound definitions. As Alfonso de Esteban Alonso (2003) points out, there are sources of noise pollution that, at high noise levels, are capable of damaging the ear, and other sources that, even at lower levels, affect the psychosomatic health of the individual and their relationship with life. I assessed these issues in the "Como convivo" project, which I implemented in a preschool and primary school in León (Díaz González, 2022) in order to design an intervention to reduce noise levels in the school environment and raise awareness in the educational community about the effects that high noise levels can have on health. I aimed to improve coexistence in the school canteen without affecting activity, while contributing to the wellbeing of students and monitors.

As Hernández Bravo et al. (2011) point out, it is also necessary to keep in mind how "activities to train the musical ear must follow the principle of totality" (p. 172), relating to other areas of music education, such as performance through singing, the body in movement, or musical instruments (Cremades, 2017). Concerning the methodological principles in the early years classroom, we should not forget that the first musical experiences are acquired through the voice and singing, with the latter being a basic pillar in the educational-musical work of primary education, which should begin at an early age with the discovery of the expressive potential of the voice (Díaz González, 2020).

Listening also appears transversally in different areas of children's knowledge in the new Organic Law 3/2020, of 29th December, which modifies *Organic Law 2/2006, of 3rd May, on Education (LOMLOE)* published in the *Official State Gazette* on 30th December 2020. It

includes attentive listening as a behavioural habit in the classroom, in accordance with the above, and a strategy to be developed to ease communication settings, promoting values of equality and respect, in relation to linguistic development in which the approach to children's literature is also valued through listening to songs and stories. Active listening is also observed through play and experimentation, as well as the enjoyment of listening to music. I will return to these issues in the next section.

In this work, I begin by highlighting listening as a main dimension of children's music education for the intrinsic development of the child. Thus, in this section, I consider the importance of attention, active listening (in communicative processes too) and listening to music, for musical understanding, as well as its links with knowledge and interpretation of other art forms and language, as reflected in current educational legislation. In the next section, I will consider the benefits of cooperative learning for the development of listening, along with the communicative skills necessary for teamwork, assessing the possibilities of adapting this active learning methodology to early years education. In the last section, I will present different resources and activities, considering image and audiovisual formats at an educational level, for experimentation and sound discrimination work by early childhood education trainee teachers. At this point, I will make proposals for adapting a selection of cooperative dynamics and techniques for music education, so that cooperative structures promote the development of teamwork skills such as listening, and also for university students implementing this methodology.

The potential of cooperative learning for developing students' listening and social skills: methodological bases

ECooperative learning is not only a method that facilitates the teaching-learning process but also a skill that students must develop (Pujolás, 2008). Therefore, we must teach students to work cooperatively, starting in early childhood education (Moruno, 2017). This involves, first and foremost, the development of pupils' cooperative skills, enabling them to work as part of a team. In this way, we cannot expect pupils to work in teams without first developing teamwork skills and, of course, without them valuing the benefits of cooperation, both for their personal development and for their classmates.

In previous research on the application of cooperative learning in music education at university level, I set out to identify the students' skills and practices that should be emphasised to effectively develop teamwork (Díaz González, 2021), which is related to the ability to cooperate that authors such as Zariquiey (2016) have discussed. Thus, I considered deepening students' experience in teams, while checking the extent to which the objectives and effective work among the research participants were being achieved. Listening was an essential interpersonal skill for students, considering four categories corresponding to characteristics of cooperative learning: positive interdependence, interpersonal skills, equal participation, and the individual responsibility of the members of the core teams.

These aspects must be in place to ensure cooperative work, together with information processing between individuals – insofar as learning is personal and untransferable – but in connection with group objectives, when learning has to be orientated towards growth objectives as a group. Moreover, a team must give all its members the chance to participate equally (equal participation), as well as giving them equal opportunities for success. These questions complete the characteristics of cooperative learning, according to the methodological bases I use in my work, following Iglesias, González and Fernández-Río (2017) for a structured and effective implementation of the methodology.

Cooperative learning can be defined as the didactic use of small groups in which pupils work together to maximise their own learning and that of others in their team, as defined by Johnson and Holubec (1999). Thus, among the characteristics mentioned, positive interdependence stands out, implying that students support each other and help each other to learn both more and better. In this sense, a learner will only achieve their goals if others achieve theirs as well. In this respect, positive interdependence helps to develop a higher level of individual responsibility among the members of the cooperative group, as the team sets common goals or objectives. The interaction from each member of the team to promote these things serves the group, as students simultaneously develop a series of social skills related to communication, cooperation, support and mutual help, which are fundamental for teamwork.

For all these reasons, teamwork or cooperative group work is distinguished from traditional group work in the following way. Unlike the traditional group, there are no leaders in a team and the responsibility for learning is shared among the group members, which must be heterogeneous if we are referring to stable or base cooperative groups (the teams that are going to last over time), with positive interdependence among the members. However, in a traditional group, responsibility is often unequal, with consequent conflicts in carrying out work when internal group organisation is missing, with certain leaders or students taking responsibility for other colleagues. As in traditional group work, there will be group evaluation in the cooperative group as well as individual evaluation (Iglesias, González & Fernández-Río, 2017).

It is important to clarify that cooperative learning advocates that each student should reach the maximum of their abilities, but this does not mean that all pupils have the same abilities. Nor does it mean that they will develop the same, equally high capabilities. As an inclusive methodology, cooperative learning defends pupils' diversity and heterogeneity at all times and places value on their differences (Abad & Benito, 2006). In this sense, cooperative learning is considered to improve the classroom climate as a safer place for students to learn; they ask for help, express their needs or can reveal their weaknesses while establishing more positive relationships with their peers (Martínez, 2021). To this end, the group cohesion dynamics of the first phase of cooperative learning will be fundamental, while teamwork in later phases can provide a safer environment that encourages the participa-

tion of all students (Iglesias, González & Fernández-Río, 2017).

Cooperative learning has also been shown to improve academic performance and help students acquire greater learning autonomy, which makes teachers' work easier; for this to happen, students must know about cooperative structures and how to work cooperatively (Díaz-Aguado, 2018). In this way, time spent teaching pupils to work cooperatively, having previously developed personal teamwork skills, will be time well invested and will be earned back as they achieve greater learning autonomy.

All in all, this methodology encourages interrelation between pupils, which is important for developing intellectual skills that require other people, such as when it comes to arguing an opinion, responding, and summarising... Piaget had already noted how the socio-cognitive conflicts that could be generated in cooperative learning could lead to the restructuring of pupils' learning. Thus, it is necessary to assess how, in contrast to individual learning, for example, cooperative learning helps to develop skills in pupils that are necessary for living and coexisting with others as members of a society. But this is only if cooperative learning is implemented in a structured way, starting with encouraging the development of communicative and social skills (which enable students to get to know each other) and their ability to reach a consensus, helping them to avoid conflict. To this end, Iglesias, González and Fernández-Río (2017) propose a structured implementation of cooperative learning in several phases. The first phase includes group cohesion dynamics and dynamics to raise students' awareness of cooperative learning, with the belief that students want to work cooperatively.

In this first phase, therefore, the first thing to do is to create a group; to this end, while the curricular contents of the different areas and subjects are being addressed, strategies and dynamics can be implemented aimed at achieving greater cohesion within the group. These would be dynamics to favour interrelation, mutual knowledge and relaxation within the group; to increase mutual trust; to encourage debate and the contrast of ideas; to try to achieve consensus in making certain decisions; to facilitate participation; to learn to resolve conflicts in a negotiated and cooperative way; and to eradicate prejudices, favouring a positive idea of difference, in support of pupil diversity. Thus, time should be devoted to group building, on the one hand, and to developing activities to raise awareness of the importance and benefits of cooperative learning, on the other, as it can help students to learn and feel good in the classroom. The aim is to emphasise positive interdependence, trying to show clear evidence of the advantages of cooperation (La Prova, 2017). In this first phase, it will be essential to focus on active listening, in order to respect turns to speak, to have the opinions and explanations of other colleagues taken into account, and also to be able to reach a consensus in the team.

In relation to these issues, the importance of silence is also established as a necessary element for communicative processes, as stated in the regulations for the first area of Early Childhood Education, Communication and Representation of Reality, in which silence is

included in the block of basic knowledge related to musical language and expression, together with sound and sound qualities (*Decree 56/2022, of 5th August*, Government of the Principality of Asturias). Not surprisingly, the positive valuation of silence by children is emphasised at an early age (Cremades, 2017), as it connects closely with communicative processes through different expressions and languages, as well as with auditory discrimination, and with other issues such as relaxation for educational purposes in early childhood.

Following on from the above, music is understood in the aforementioned decree as a language that "allows communication with others and enables the development of aspects such as attentive and active listening, sensitivity, improvisation and enjoyment through the voice, the body itself or games for developing motor and auditory skills" (*Decree 56/2022, of 5th August*, Government of the Principality of Asturias, p. 21). This is the idea of music as a means of communication and expression through artistic language, which will also continue to the next stage of primary education through the development of different means of sound and musical expression. The communicative value of music is thus emphasised while music education encourages active listening, which is also highlighted in other aspects regarding pupils' communication and interaction, through the development of "strategies that facilitate exchanges in communication settings that promote respect and equality: eye contact with the speaker, attentive listening, turns for speaking, and alternation" (Decree 56/2022, of 5th August, Government of the Principality of Asturias, p. 26).

Active listening is also taken into account when recognising children's sociocultural diversity, alongside considering activities that can involve different types of languages. These issues are linked to teamwork in the Growing up in Harmony area, as the specific competencies state that "recognition and appreciation of the sociocultural plurality of the classroom should be encouraged through activities and games that value different customs and traditions and favour assertive communication of one's own needs while listening actively to those of others in co-educational and cooperative processes" (*Decree 56/2022, of 5th August*, Government of the Principality of Asturias, p. 12). Considering that the specific competencies of the new law link to the key competencies of each stage, we can see that teamwork and cooperation between pupils are already valued in early childhood education through competencies such as Personal, Social, and Learning to Learn, among others, helping each pupil to achieve greater autonomy in their learning, work with others, cooperate fairly in interactions, and develop as a person.

In view of the above, it seems necessary to consider the possibilities of cooperative learning in early childhood education, bearing in mind that this methodology is closely linked to other methods such as Project Based Learning, which is largely supported by the new LOMLOE. Teachers such as Luisa María Jorge (2017) have implemented cooperative learning in early years classrooms, highlighting the methodology's benefits for various purposes: working on social interaction strategies such as personal self-management skills; de-

veloping emotional intelligence and self-esteem in social settings; promoting meaningful learning – in line with Ausubel's evaluations of teamwork – which the author links with learning through discovery, when referring to the meaningful construction of learning; and fostering children's motivation. Family activities (workshops and storytelling, for example) are also important as a means of fostering knowledge of, involvement in and awareness of cooperative methods, not only in schools but also at home.

In this way, different authors propose the adaptation of cooperative learning structures in early childhood education, as well as the implementation of simple techniques typical of the second phase in the implementation of cooperative learning (Iglesias, González & Fernández-Río, 2017). Thus, a series of techniques or structures are used, and these are then applied to work on the specific contents of any area of the curriculum in such a way that they generate a need for collaboration and help among those involved in the teaching-learning process. Simple techniques are learning activities of short duration that are easy to learn and apply. However, not everything that purports to be a cooperative structure is actually cooperative. In order to be truly cooperative, two basic conditions must be met: the active and responsible participation of all learners in the team must be ensured to the maximum extent possible, and there must be as much interaction as possible between learners in the same team. Interaction between peers in the joint construction of knowledge, as I have been explaining, is essential in the teaching-learning process for the development of skills such as listening.

In the structured implementation of the methodology, there is still a third phase, with the adaptation of complex techniques, which already need several working sessions and require a high level of cooperative skills and great autonomy on the part of the base teams, which will have been formed at the beginning of the second phase (Iglesias, González & Fernández-Río, 2017). Bearing this in mind, I will here make proposals for adapting the dynamics and techniques of the first and second phases, respectively, considering that the third phase may not yet be suitable for application in early childhood education, but rather in subsequent educational stages. Furthermore, it is necessary to consider the time constraints of semester-long modules in higher education, in order to reach the third phase of cooperative learning where, according to my teaching experience, university students are not used to working in teams either.

Cooperative strategies and audiovisual resources for auditory development for early childhood trainee teachers

To support early childhood education trainee teachers, in this section I propose different adaptations of simple cooperative dynamics and techniques (from the first and second phases of cooperative learning) related to listening and their involvement with the discovery of the sound potential of the environment, the discrimination of the sound potential of sound objects and musical instruments, the appreciation of the expressive potential of one's

voice and that of others, the recognition of sounds of different qualities, and the expressive and communicative potential of sound as a support for the meaning of children's texts, as well as images.

With the adaptation of cooperative dynamics and structures (according to the bases set out by Iglesias, González & Fernández-Río, 2017), I aim to ensure participation and interaction among students so they develop social and communicative skills, which prepare them for the cooperation expressed in previous sections. In the following proposals, I consider the usefulness of different visual resources and audiovisual formats in the educational context to support auditory work. It should also be borne in mind that many of the activities I propose below can also be adapted for use in the early childhood classroom, with a view to involving families in cooperative learning.

- "The orchestra staff" (adaptation of the awareness-raising dynamic, "El equipo de fútbol"), with the text for student sharing that I previously contributed to the manual published by Pirámide (Díaz González, 2017). Based on the text, which introduces the importance of the different roles of the sections of musicians that make up an orchestra, I created parallels with a classroom with a cooperative structure. Random teams of four students have to reflect on a text under the guidance of the teacher, recognising different families of instruments and familiarising themselves with the functioning of a symphonic ensemble, in order to achieve the final group incentive, which in this context would be the concert. To this end, in early childhood education, I propose complementing this material with audiovisual bits[1] for the visual and sound recognition of different musical instruments[2]. It is important for pupils to be able to assess how the sound and visual elements are articulated in this type of resource, according to their pedagogical objectives in the classroom, bearing in mind that the name of the objects may or may not appear visually, their sound may appear before or after the image or the name that represents them, the sound quality may not be the most suitable, etc.
- "Each sheep with its sound partner" (adaptation of the group cohesion dynamic, "Los Refranes"). I prepared pairs of cards with graphic representations of sounds with different characteristics, following the proposals for non-conventional sound graphics by Palacios (1993) and for the identification of sounds and objects by Musicaeduca[3], among other proposals, such as the *Suena Suena* method by Huidobro and Velilla. For example, a proposal for a graphic card would be five circles drawn in different sizes, from larger

1 Recall that intelligence bits are units of information, visual information cards that constitute a method of early stimulation devised by Glenn Doman, based on the repetitive visualisation of (and listening to) these bits. The technique consists of using a precise illustration or drawing, or a good-quality photograph, accompanied by an auditory stimulus, which consists of saying aloud what it represents. With today's audiovisual media, we have videos and even interactive games, which allow the addition of other auditory stimuli for the recognition of certain sound-producing objects.

2 See, for example, https://www.youtube.com/watch?v=_gyXmNXK4aI among numerous videos that can be found for this activity on YouTube. Accessed 18th September 2022.

3 See https://www.musicaeduca.es/recursos-aula. Accessed 18th September 2022.

to smaller (representing five sounds of different intensities, from louder to softer) and placed from bottom to top (to distinguish different pitches, from lower to higher). Pairs of pupils should meet only to reproduce the sounds vocally (without showing the cards). Afterwards, the pairs should discuss and reach a consensus on the sound qualities represented, and then explain them to the class group.

This would be the step before the creation of model sound itineraries to be taken to the early childhood classroom in random teams of four. Each member of the team should take responsibility for representing one of each of the four qualities of sound (pitch, duration, timbre and intensity) and together they should come up with the necessary methodological strategies to bring the resource to the classroom for children's participation. The idea is that the children can follow the sound itinerary (see, as an example, Figure 1) while other children make the sounds, allowing for the sound characteristics of the diversity of sound media that can be used in the performance (the voice, their bodies, toys, other sound objects, or even DIY instruments or musical instruments).

Figure 1. Sound-graphic itinerary produced by 2nd-year students on the Degree in Early Childhood Education at the University of Oviedo, in the 2022–2023 academic year.

- "Vocal effect maps" (group cohesion dynamic, to encourage work in pairs). This dynamic is inspired by Schafer's proposals for vocal and auditory education. The idea is to group students in pairs to interpret a succession of vocal sound effects which, when collected visually on a sort of map (using drawings, words or photographs), correspond to different feelings, emotions, objects or situations (e.g. anger, laughter, joy, doubt, surprise, pain, a bee, a fall, etc.). The idea is to rediscover the expressive potential of the voice while calibrating its full range; in this respect, it can be used as a vocal warm-up activity

before singing. Thus, the map is first reviewed individually and the partner is consulted if ideas are needed for the vocal performance of some points. For the performance, the game "The director and the performer" is proposed, so that one of the students can indicate different points on the map that their partner must then reproduce. The roles are swapped. The activity ends with the incorporation of new sound effects, by consensus between each pair of students, which will be shown to the class.

- "The emotion that moves us" (adaptation of the group cohesion dynamic, "Desfile de modelos"). In this activity, I propose relating music with movement and silence or absence of music with stillness or stopping, to distinguish silence from sound using movement with displacement (along the lines of such well-known activities as "Statues"). In this case, we will select soundtracks that allow students to relate the music of different scenes from well-known films to different emotions in an expressive way, using free movement through the space. Thus, I propose that students first move without the visual reference, to then visualise the film scene, so that we can refer to the musical characteristics by pooling the emotions in order to help children to recognise and manage their own emotions and to distinguish those of their peers. Some suggestions for themes for this activity, including how music can influence not only the transmission of emotions but also their transformation, are: I Wish, a song by Stevie Wonder included in the film *Happy Feet* (happiness); *Remember Me*, a song from *Coco* (sadness); or the main theme from *Jurassic Park*, by John Williams (surprise).
- "The piano factory" (adaptation of the awareness-raising exercise "En un taller de carpintería"). A text to be adapted and completed by the teacher[4] gives examples of how to work individually or in a team, which can be used in the class. This adaptation can also be used to work on musical instruments and their characteristics, the orchestra, or instruments of different musical formations and styles. It can also be presented as a gateway to a "lutherie workshop", for manufacturing homemade instruments from disposable and everyday objects (Figure 2)[5]. This type of activity can involve the pupils' families if carried out with young children. The wide range of materials for creating DIY instruments (see Figure 3) also allows students to delve deeper into the sound potential

4 The beginning of the text could be as follows, to implement the dynamic: "In a piano factory, there are times in the manufacturing process when each worker or craftsman completes their work in different rooms; at other times, the work is done as a team, such as when building the wooden sounding board. In addition, when someone in the team needs help because the task is difficult, such as when refining the edges of the instrument, other colleagues help them with it. When a worker learns a technique or a new procedure, they teach it to others so that the work can be done efficiently together [...]". I suggest using videos such as the following about the construction of a piano in a complementary way, according to the teacher's adaptation and the teaching objectives: https://www.tecnopiano.com/blog/construccion/#tab-con-12. Accessed 18th September 2022.

5 In this teaching activity, we introduce students to projects such as the Orquesta de Instrumentos Reciclados de Cateura, in Paraguay: an orchestra made up of young people at risk of social exclusion, from the areas near the largest landfill in Paraguay. At the beginning of this project, we highlight the work of Paraguayan musician Luis Szarán, who created the "Sounds of the Earth" project to bring music to the country's most disadvantaged populations through the creation of free schools. See, also as a classroom resource, https://www.youtube.com/watch?v=7AOnZb7ZlJI. Accessed 18th September 2022.

of sound objects, depending upon their physical characteristics and the means of handling them for sound activation.

Figure 2. A pan flute – an example of a complex DIY instrument made by 2nd-year students on the Degree in Early Childhood Education at the University of Oviedo, in the academic year 2021–2022.

Figure 3. A güiro – an example of a complex DIY instrument made by 2nd-year students on the Degree in Early Childhood Education at the University of Oviedo, in the 2021–2022 academic year.

- "We add sound to texts in a team" (using the simple technique, "El folio giratorio"). Elaborate DIY instruments, with all their sonic possibilities, can be used to add sound to children's texts. For example, adding sound to a story involves incorporating sound effects that are descriptive, expressive, and identifying to aid comprehension[6]. To do this, the teacher can propose a selection of images for which the pupils, in teams, must develop the text of a children's story, to which sound effects will then be added. The text can be

6 See an example of a children's story with sound, made by a group of students on the Teaching Degree in Early Childhood Education, from the 2021–2022 academic year. It is hosted on the music education channel that I created within the framework of the teaching innovation project "Online television in teacher training: a multilingual and multidisciplinary educational resource" (UO, PINN-18-A-022): https://www.youtube.com/watch?v=xpd5YYD- Ya4. Accessed 18th September 2022.

created progressively by teams of pupils, allocating different scenes to each team. In this way, each team creates the text with the ordered participation and involvement of its different members, using a sheet of paper that is passed along, to include the contributions of each member, without skipping a turn. I recommend that the teams exchange the instruments among themselves, if they have created different ones, to extend their research into the sounds of the objects while encouraging care for their own and other people's things, which is also applicable in the early years classroom.

- "We are Foley artists" (using the simple technique, "Lápices al centro"). This year, we proposed that the university students design sound for moving images, through a selection of film scenes (such as when Chaplin meets the young violet girl from City Lights)[7], highlighting the profession of Foley artists in cinema, encouraging sound experimentation with different types of sound sources. It should be noted that, in other years, we proposed designing sound for still images, to use sounds produced by groups of pupils to recreate images of everyday situations, landscapes, pictures of artwork, etc. In order to organise the sound of the scene, I propose that the technique be carried out in teams with the ordered participation of team members. In contrast to "El folio giratorio", in this technique, the student will write down his or her idea for the sound system only when each contribution is discussed and agreed upon with the other team members.
- "Cooperative gestured song" (using the simple technique, "1-2-4"). Work on songs, to which gestures are added based on the text (which also involves auditory work), by matching the movements to the rhythm and progress of the lyrics of a piece. To organise the search for and selection of gestures for the performance, I propose the "1-2-4" technique whereby each pupil first thinks individually about a proposal for gestures, which they then present in pairs with another member of their team. The team then reaches a consensus together on the most appropriate gestures for the song, always considering children's participation in the performance.
- "We accompany songs" (using the simple technique, "El grupo nominal"). Instead of the teacher proposing a rhythmic accompaniment for a piece with small percussion Orff instruments of indeterminate pitch, I suggest that the pupils should make proposals for accompaniments in the form of an ostinato. To do this, we can use the technique "The nominal group", so that each team decides on a rhythmic ostinato by consensus; the pupils then vote on the different contributions, so that the ideas proposed by the group are ranked in order of importance, and the rhythmic ideas with the highest number of votes are selected. Afterwards, I suggest dividing the class into groups to perform the selected ostinatos, working on the musical form with a specific accompaniment for each part of the piece according to its structure. By way of rhythmic dictation, the students should then write down the musical rhythms to clarify the figures and rhythmic combinations that were performed.

7 See the film scene at https://www.youtube.com/watch?v=8gqDogrErps. Accessed 18th September 2022.

Conclusion

The cooperative learning methodology strengthens the development of communicative skills in students who must learn to work in teams at different educational levels. With learning processes that involve interaction between pupils, listening is a fundamental aspect for enabling them to work cooperatively within a diverse group, making the classroom a more inclusive, safe and suitable space for learning. Music education favours listening training, insofar as listening education also connects with different dimensions of musical expression, while music is presented as a communicative medium for pupils from an early age. I have also evaluated the importance of active listening for musical understanding and the shaping of the collective sound imagination, with its sociocultural implications.

Thus, music education can promote the development of the personal and social skills necessary for teamwork, with group performance and respect for the contributions of others to sound and musical practice, or the positive valuation of silence for communicative processes. But cooperative learning can also foster skills that are important in music education, such as listening, respect for the contributions of others, or mutual support to achieve common goals, such as the group performance of a piece or musical exercise. In this sense, the design of activities through the adaptation of cooperative dynamics and techniques, also with the support of images for a structured implementation of the methodology, can improve the teaching-learning processes of students in music education. This will help them to develop skills that will facilitate working better with others, respecting differences and the value of consensus, being more autonomous in learning and, in short, helping teachers to train more competent students.

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