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MUSIC AS A NONVERBAL COMMUNICATION LANGUAGE. METHODOLOGICAL REVIEW GROUNDED IN EXPERIENTIAL OBSERVATION

LA MÚSICA COMO LENGUAJE DE COMUNICACIÓN NO VERBAL. REVISIÓN METODOLÓGICA BASADA EN LA OBSERVACIÓN EXPERIENCIAL

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Abstract
I participated in the Erasmus+STT training mobility programme at the University of Coruña, as a guest of Dr. Rocío Chao Fernández. The contact was established through a series of music development games and tests from a scientific point of view. As a music educator and music therapist, I undertook this mobility in order to experience and discuss research methodologies and alternative approaches in music education. The music session I observed on site was a sound installation. Free instrumental improvisation and various forms of sound production can elicit complex motor, affective and behavioural responses. In music therapy sessions, musical instruments provide means of communication that can be integrated with social components, among others. They precede, complement or accompany speech, and emotionally reinforce the information conveyed during the session (Konta, 2010; Szabadi, 2021, 24). The role of instruments in the teaching process is also increasing, as they can serve as supportive and illustrative tools. They are also means of stimulating interest and motivation. When introducing basic musical forms, playing an instrument can function both as a method and as an object of observation. From a research-methodological perspective, emphasis is placed on the possibilities offered by musical play sequences, measurement tools, and test recordings (Gallego et al., 1999; Chao-Fernandez, Gisbert-Caudeli & Vázquez-Sánchez, 2020).

Keywords: creative music; sound installation; music therapy; music experience; research methodology

Resumen
Participé en el programa de movilidad formativa Erasmus+STT en la Universidade da Coruña, como invitada de la Dra. Rocío Chao Fernández. El contacto se estableció a través de una serie de juegos y pruebas de desarrollo musical desde un punto de vista científico. Como educadora musical y musicoterapeuta, el viaje de movilidad se realizó para experimentar y discutir metodologías de investigación y alternativas en metodología musical. La sesión musical observada in situ es una instalación sonora. La improvisación instrumental libre y las diversas formas de producción sonora pueden desencadenar reacciones motoras, afectivas y conductuales complejas. Durante las sesiones de musicoterapia, los instrumentos musicales ofrecen modos de comunicación que pueden combinarse con componentes sociales, por ejemplo. Preceden, complementan o acompañan al discurso y refuerzan emocionalmente la información transmitida durante la sesión (Konta, 2010; Szabadi, 2021, 24). El papel de los instrumentos musicales en el proceso de enseñanza también aumenta (pueden servir como herramientas de apoyo e ilustración). También son un medio para despertar el interés y la motivación. Al introducir formas musicales básicas, tocar un instrumento puede ser tanto un método como un objeto de observación. Desde el punto de vista metodológico de la investigación, se enfatizan las posibilidades de las secuencias de juego musical y las herramientas de medición, como las grabaciones de prueba (Gallego et al., 1999; Chao-Fernandez, Gisbert-Caudeli y Vázquez-Sánchez, 2020).

Palabras clave: música creativa; instalación sonora; musicoterapia; experiencia musical; metodología de investigación

1. INTRODUCTION

I participated in the Erasmus+STT training mobility program at the University of Coruña as a guest of Dr. Rocío Chao Fernández[1] Full Professor at University. As a music educator and music therapist, the purpose of the contact was to experience and discuss alternatives in research methodology and music methodology. Our collaboration involved a series of music development games and tests from a scientific perspective. Thanks to Dr Rocío Chao Fernández and his colleagues, I was able to observe and discuss the methodological elements of music sessions, classroom conditions, collection of instruments, and specific aspects of music pedagogy. I gained insights into the nonverbal communicative modes of musical elements and their social transfer effects. I also had the opportunity to review song collections and reference books, analyzing them from methodological, stylistic, linguistic, and communicational perspectives.

From a pedagogical and research-methodological standpoint, I was able to observe various sound production techniques, the socio-emotional transfer effects of music, and the categorization of song collections. The observation and application of tests and a series of music development games enabled me to establish meaningful scientific connections. From a theoretical perspective it is known how music became an ancient language and a form of self-expression. At the origins of musical practice, nature itself functioned as a creative, sustaining, and motivating force (Szabolcsi, 1975). Rhythm, melody, harmony, and form are all present in both the natural environment and the human body (e.g., breathing, heartbeat, walking). Consequently, the fundamental elements of music can be regarded as part of the primordial experiential heritage of human evolution.

1.1. Type of mobility

The training mobility type is suitable for developing a research topic through observations and analyses. It can be used to establish professional relationships and prepare for future collaborations. For music teachers and music therapists, it provides an opportunity to observe and discuss various alternative musical trends. It also offers a platform to address challenges, find solutions, and build personal and professional relationships regarding methodological issues, which can be planned with a long-term perspective.

From the perspective of scientific research, this mobility contributes to the preparation of international publications. It also supports the development and planning of other mobility proposals specified in the internationalization strategies of both faculties. From a musical perspective, it helps to introduce new musical trends and methods, as well as new professional training.

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Mobility activities contribute to the formation of teachers' attitudes, the expansion of methodological toolkit (instruments, song materials, sheet music, music tests), the renewal of the use of instruments and the expansion of musical tools. Since the musical elements used in music therapy precede and complement speech, they open up numerous non-verbal communication channels. Mobility likewise facilitates the acquisition of research methodological principles and techniques (for example, through the use of digital music tests). It can be particularly helpful in the adaptation of foreign language tests.

1.1.1. General objectives of the mobility

The aim of the project was to find solutions to the professional problems arising in the specific field of music therapy research and music education.

1.1.2. Added value of mobility

The methodological competences of music education have become developable with new elements of music therapy.

1.1.3. Activities to be carried out

During the mobility activity, the testing of new music therapy tools expanded the musical repertoire and research methodological tools. In addition, the professional network was strengthened and expanded.

1.1.4. Expected results and impact

Expected outcomes and impacts of mobility include the discovery of new therapeutic techniques and modes of self-expression, the expansion of research methodological guidelines, and the strengthening of internationalization during visits and experiences at university.

2. EXPERIENCES ON THE SPOT AT THE UNIVERSITY

2.1. Music sessions – Bosque máxico – sound installation

One widely accepted starting point for the origins of music is that it emerged from the imitation of the sounds of nature or the sounds and noises accompanying human activity. The sound phenomena accompanying strong emotions – such as pain, joy – were also the first musical manifestations. Human vocalization, in its objectivity, shows the state of mind and practical life events. For example, shouting – a kind of undifferentiated vocalization – was an important step in terms of the development of singing and speech (Ujfalussy, 1962). Anthropological studies suggest that humans began singing before they spoke because the muscles needed for articulation evolved later (Menuhin, 1981). Similarly to earlier theories, Révész (1941) also noted that musical elements played a role

in ancient forms of establishing contact. In his example, a denoting calling sound requires such a high volume that it can only be expressed with a "singing" sound. These signals also contain musical characteristics (interval, transposition authority, intonation, rhythm), of which intonation and rhythm are also characteristics of speech.

Dr. Vicente Castro Alonso[2] Assistant Professor presented a music session and explained its theoretical background. The session was based on the concept of a so-called sound installation, approached from a kind of open perspective. He described how the characteristics and concepts of the sound space (for a visual illustration see Figure 1) are adapted to the early childhood education and age specificities. To create this space, teacher-training students received prior preparation, which included introducing concepts such as *sound installation*, *graphic notation*, and the *exploration of sounds through various objects*. The elements listed are based on the work of 20th century music educators Murray Schafer and John Paynter.

When observing the sound field, it becomes obvious that the acoustic stimuli that appear (rattling, clanking, drumming, splashing water, etc.) become tools for maintaining contact during social interaction, thereby opening a kind of nonverbal communication channel between two people/groups.

Figure 1

Soundspace illustration

Note. Source: own editing

Murray Schafer (1933-2021) was a Canadian composer, writer and educator. His work focused on the reduction of harmful environmental noise. His experiments in music education focused on creative music listening and the sensory awareness of musical elements. He introduced young musicians to unusual soundscapes while involving them

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in the composition of music using minimal -aleatory techniques. His concept of the sound field was largely inspired by the spatial placement of the characters (The Canadian Encyclopedia, n.d.). John Paynter (1931-2010) was a British composer, music educator, and a proponent of creative music (pedagogy). He believed that music should be at the heart of the curriculum. Paynter passionately believed that music was exciting for children to explore independently, and that the subject could be approached in many ways. While the public face of school music education focuses on instrumental learning and teacher-led performances by choirs and orchestras, his work has shown to the teachers how students can explore sounds and make their own interpretive decisions about sounds through composition projects (Spencer, 2010).

The sound installation is the acoustic environment perceived by people in a given context. A soundscape is a sound or combination of sounds that forms or arises from an immersive environment. The term soundscape also refers to the natural acoustic environment which consists of natural sounds including animal vocalizations. This is now called biophony. Furthermore, the term soundscape also concerns to the sounds of weather and other natural elements, which is now called geophony. Finally, term also means to the environmental sounds created by humans, which is called anthropophony. *A graphic score/notation* is a representation of music using visual symbols other than traditional musical notation. Emerging in the 1950s, graphic notation may be used alongside or in place of conventional notation. Its conceptual foundations were influenced by contemporary art movements, incorporating stylistic elements of modern visual art into musical representation (Schafer, 1977).

Sound production using objects also appears as a method in active music therapy practice, where musical instruments (classical instruments, xylophone-type instruments, self-made instruments, as well as animal and body sounds) are not played in a professional or conventional musical manner. Consequently, the interpretation is not determined by a musical theme or structure, but by a kind of communication game. While the musical product is determined by the aesthetic nature of the work (musicological aspects), music therapy improvisation is the catalysis of our current emotions and memories through music. That is why the communication element appears in music therapy improvisation through the expression, transmission and validation of nonverbal signals and verbal information (Szabadi, 2021, 2024).

According to Baráth (2019) the concept of sound installation itself originates from early sound sculptures. These were made in the previous century for utilitarian purposes. Such were, for example, musical clocks and mechanical organs. Mechanical instruments with artistic demands appeared in 1915 – with the idea of building kinetic sound machines by the futurists Fortunato Depero and Giacomo Balla. At the time, the combination of various elements and modes of sound production led to the emergence of complex structures that quickly gained recognition. Instead of being displayed in galleries or confined studios, these instruments were increasingly placed outdoors, in open spaces. This was first done by using different landscapes or natural elements (wind, rain), etc. Extensive sound sculpture was created, including concrete works, which are now sound installations. In this case, the sound was already a structural element.

Meanwhile, the concept of the installation itself developed further. According to Baráth (2019) Dan Flavin first used neon tubes to place the works and expand the space. Max Neuhaus then used the sound installation in which the sound was located not in time but in space, and sounded in the way he defined as a compositional device.

Theoretical writings have also been written about installation and sound installation. According to Baráth (2019) in the theory of Spanish artist Concha Jerez, "Installation is an extension of a three-dimensional space. In contrast to sculpture, the given space, the environment of the work, is just as much a part of the creation as the axes that determine the extent of the sculptures". Therefore, sound installation is an intermedial and intermodal artistic form, an extension of sculpture and installation. Since it is the result of connecting sound and space, it has consequences. Resonances and reflections enable a more precise and broader perception. Due to the spatial and temporal evolution of sound one must expect and observe the cascading effects and their spatial manifestations (Baráth, 2019).

The relationship between space and sound can therefore be approached in multiple ways. John Cage drew attention to the sounds that permeate different spaces and to their interactions, highlighting how we perceive the connections among them. Terry Fox, for example, stretched two strings across a church, allowing the architectural space to act as a resonator and effectively turning the building into the body of an imaginary musical instrument (Baráth, 2019). Sound can be created in various ways within an installation. A given sound or sound material can be repeated several times, but there can also be sounds that interact with each other. Furthermore, electrotechnical devices can be used, creating programs to create sound complexes (Baráth, 2019).

From a pedagogical and educational perspective Castro-Alonso & Chao-Fernández (2024) demonstrated in their exploratory, narrative study the positive impact of sound installation on the teaching process in terms of cooperation and socio-emotional transfer. The data obtained through the questionnaire survey and individual recollection support the flexibility of sound installation, its adaptability to classroom conditions, and thus its pedagogical relevance in children's motivation. And the results also validate the interdisciplinary learning process that takes place during voice training. After organizing the didactic exhibition for two- to three-year-old children, the teacher training students stated that they experienced a broader perspective of music education, which renewed their sense of professionalism, expanded their problem-solving skills and strengthened their perseverance. In their recollections, they emphasized that although the teacher constantly supervises the children in their exploration of the sound field, it is the children's independent and genuine exploration and sound production that is important. To achieve this, teacher training must support didactic elements that are adapted to the unique profile and nature of the teacher (Castro-Alonso & Chao-Fernández, 2024). The personal characteristics of music can be experienced most directly by students in singing methodology lessons.

2.2. Singing lessons (methodological features and practice)

The approaches to music education experienced here are based on the transversal functioning of music. Dr. Rocío Chao Fernandez Full Professor at University presented and explained the practical principles and theoretical framework of music lessons. In her presentation, the active method of music education focuses on the students' thinking skills and supporting their learning processes. Acquainted musical methods are based on students' creativity and reflective abilities. In the educational process, special emphasis is placed on auditory skills, perception, and discrimination. The musical material itself contributes to self-expression and the expansion of musical repertoire. By combining movement and rhythm, the connection between body and sound is revealed, promoting the development of musical and motor skills. The Orff rhythm instruments are included as a didactic element that supports community creation in a motivating sound environment. Overall, the musical content aims not only to develop musical abilities and acquire musical knowledge, but also to promote holistic personal development.

Dr. Vicente Castro Alonso Assistant Professor also presented and explained the methodological aspects of music lessons. The focus of these lessons is on creativity and sound production, enabling an inter- and multidisciplinary approach to sound-generating devices. Other artistic media, such as movement and visuality, also appear. This gives a broader interpretation of the musical transmission effect. The social aspect of music learning is also an important principle. In this process, music is a medium of communication in which connection between people can be realized. In the lesson, students can explore possibilities for self-expression and find their personal musical abilities. They are given the chance to experiment with alternative sound-creation methods, engage in music composition, and perform traditional song materials (see Figure 2 for a classroom illustration).

Figure 2

Classroom illustration

Note. Source: own editing

Various melodic and rhythmic instruments (e.g. xylophone-xiloton instruments) that also appear in music therapy motivate, arouse interest and inventiveness, and promote the recognition of differences/similarities. They offer alternative solutions to social content/situations assigned to instrumental improvisation and provide a wide spectrum of self-expression opportunities. In short, instrumental elements expand communication as the expression of experiences, and effects with musical elements becomes more effective and informative. During active music making, singing and playing instruments, moods, vibrations and emotions are manifested that often lack appropriate words to express. Sound production can trigger also complex motor, affective, and behavioral reactions (Konta, 2010; Szabadi, 2021, 2024). The role of musical instruments is increased in education (they can also be a supportive, illustrative tool). They are also a means of arousing interest and motivation. When introducing basic musical forms, playing an instrument can be both a method and an object of observation. For children, learning is a manipulative, action cognition, through which they gain experience in a complex unity of movement. This is why the teacher must be able to play an instrument. His/her training must prepare him/her to perform a piece of music that he/she can play with confidence. The interpretation must be authentic, i.e. it must express the mood and emotional content of the music with the right tempo, tone, rhythm and articulation (Forrai, 2024).

Sounds of varying intensity, color, pitch, and rhythm carry meaning or convey a message, which is further refined by the accompanying human gestures, movements, and facial expressions. These experiences must be acquired or deepened for people to be able to communicate. These are among the goals of active music therapy sessions. So-called idiophonic instruments (Greek word idio = itself) produce sounds by the vibration of a flexible solid body. This process does not always occur by itself, as the name suggests, but often with the help of air resonators or connected bodies that act as mediating acoustic devices to help radiate sound. Some of them are tuned - sounding at a specific pitch such as the bell, xylophone and marimba. And there are also non-tuned ones such as the triangle and the cymbal (Tarnóczy, 1982). The imitation of vocalization, shouting and environmental sounds led to the creation of the simplest musical instruments which are still used today and which are also tools for active music therapy (e.g. ORFF instruments). For an example of a family of musical instruments see Figure 3.

Figure 3

Example of the musical instruments

Note. Source: Szabadi, 2021 pp. 63.

During their practicum, students observe that when producing sounds, children display characteristic behaviors – such as posture, facial expressions, eye contact, and body language – along with emotions (or a noticeable lack of them) and varying intensities of behavioral reactions. Joint musical actions create an opportunity for interest and further reactions. Imitation of the heard and experienced musical pattern provides the basis for the most ancient form of learning. To ensure the development of communication, diverse experiences are needed. A good condition for this is playing an instrument, which provides a multisensory experience. Making music together allows for self-expression, spontaneous reactions, and the formation of personal associations. It also promotes reciprocity and flexible thinking, which are essential components of effective communication. Overall, musical instruments offer ways for the communicational transfer effect of music, which students must keep in mind during their training.

From the perspective of musicological research on communication and self-expression, it may be instructive to review McLean's famous theory based on Bencze (1985). In the evolution of the mammalian brain, he links the care of offspring to the development of the limbic system. He points out that the emphasis of perception shifted from smell to vision and then to hearing. Researchers see the reason for this in the fact that hearing sounds is even more reliable in communication than vision. This is also underlined by the fact that sound is most capable of evoking or reducing emotions. In addition to verbality, awareness of emotions has also developed – which appeared in a more primitive form in primates during evolution – and emotions also force the practice of verbal communication. Even fully developed language retains “musical factors” (such as volume, intonation, and rhythm) that determine the affective content of words and sentences. These show the close relationship between emotions and intonation (Bagdy, 1986; Pléh, 1991). Inarticulate vocalization is accompanied by a kinesthetic-motor sensation of the larynx, caused by the greater muscle tension necessary to produce a higher and stronger sound (Ujfalussy, 1962). The origins of language are therefore linked to these fundamental sources: the dual experience of reduced expressive movements and the imitation of sounds.

We can build a series of musical games to perceive and group sounds, songs, and timbres. This way we can make musical skills measurable and indirectly get a picture of socio-emotional effects.

2.3. Digital music exercises and measurement tolos (scientific approaches)

A very important example from the point of view of music therapy research methodology is the knowledge of musical game series and the possibilities of measurement tools and test recordings. In such contexts, the primary aim is not necessarily to develop or assess musical skills, but rather to measure and analyze the social transfer effects of music. Accordingly, in the present study a musical game series was employed, and its developmental impact was evaluated using emotional and social assessment tools.

The music video game *Musichao* (for a pictorial illustration, see Chao-Fernandez, Gisbert-Caudeli & Vázquez-Sánchez, 2020, pp. 6-7), linked to the work of Rocío Chao Fernández and colleagues, is a series of musical activities for students with behavioural disorders (n=6, 17-18 years old) (Chao-Fernández, Gisbert-Caudeli & Vázquez-Sánchez, 2020). The musical games are adapted to the curriculum content and experimental experiences. According to the results, emotional intelligence tests designed by Gallego, Alonso, Cruz and Lizama (1999) showed significant improvements in both emotional skills and emotional intelligence, as well as in self-motivation, self-awareness, self-control and especially social skills (number of aggressive expressions).

Dr. Rocío Chao Fernandez explained and analyzed the details of the experiment. The study used a pre-experimental design without a control group. The Musichao game is an educational board game originally designed to develop musical competences at secondary school level. An adapted version was used in this study. The game consists of 59 questions divided into five curricular blocks, presented on a spiral-shaped digital board. Students progress by rolling dice, answering questions, and accumulating or losing points (+10 for correct answers, –10 for incorrect ones). Students progress by rolling dice, answering questions, and gaining or losing points (correct answers +10, errors -10). Extra features include “More information” buttons to expand the content and help teachers track performance (all answers, correct/incorrect). During the process, the school counselor administered pre-tests to diagnose emotional intelligence and social skills. Musichao was therefore made part of the curriculum in a school setting. Students worked individually and later in groups to encourage collaboration. They also interacted through musical elements such as body percussion, boomwhackers, and Orff instruments as part of music therapy techniques.

The program was implemented in three weekly 50-minute sessions over the course of the school year, with 10-15 minutes of playing per session. Post-tests were administered at the end and the results were compared with the pre-tests. In terms of results (methodology-related), significant improvements were observed in several intelligence and emotional intelligence subcomponents (especially in the area of social skills, in the number of aggressive/ inappropriate behaviors). Although there were limitations due to lack of randomization and small sample size.

The series of musical games are arranged thematically, according to curricular themes. An eighth note is the starting block. The cursor, which moves along a dice roll, moves the surface to the position the student is on. The different topics run in a spiral, and the topics are represented by pictures. If the student cannot answer the question, the program moves forward by two questions. The game begins with a dice roll, after which right-clicking randomly generates a number corresponding to the current topic. In addition, the system provides information on the number of student responses and the number of incorrect answers, and students also have access to multiple-choice answer options. Furthermore, the program covers information related to composers, characteristics of musical forms and instruments, presenting official musical details.

The following devices were used to measure the results. 1. Seven Intelligence test (Gallego et at., 1999, pp. 18.), which measures average intelligence from a score of 35 items, 2. Global Emotional Intelligence test (Gallego et al., 1999, pp. 45.), which measures the relationship between intra- and interpersonal intelligence from a multiple-choice set of 8 items, 3. Self-motivation test (Gallego et al., 1999, pp. 125.), which assesses motivation to achieve goals and results from 23 dichotomous responses, 4. Self-awareness/self-consciousness test (Gallego et al., 1999, pp. 77.), which assesses the overt/explicit expression, recognition and management of emotions from 16 dichotomous responses; 5. Social skills test (Gallego et al., 1999, pp. 180.), which assesses the expression and management of emotions, opinions, and thoughts in an appropriate manner and at the right time, through 20 items/questions, evaluating 5 categories (ability, inadequacy, inhibition, aggressiveness and anxiety) (Chao-Fernandez, Gisbert-Caudeli & Vázquez-Sánchez, 2020).

The mobility connection with Rocío Chao Fernandez was established during the adaptation of the Self Awareness Test from the above tests. As part of this process, after the official license request, the test was translated and then back-translated, and finally the technical text was proofread. The test's goodness indicators are based on the results of the trial measurement (Cronbach's $\alpha = 0.73$; correlation with emotion regulation $r = 0.75$, $p < 0.001$) (Szabadi, 2024).

Calculations of the study: due to small sample size (n=6) and non-normal distribution of the curve, Wilcoxon test was used to pool pre- and post-test data, and "mean standardized Exchange Rate" (dMR) was used to test the effect size of the experiment. Similar to the Cohen's d- effect size index, a value below 0.10 was defined as insignificant, between 0.10-0.30 as a small effect, between 0.30-0.50 as a medium effect and above 0.50 as a large effect (Chao-Fernandez, Gisbert-Caudeli & Vázquez-Sánchez, 2020). The applied effect size and calculation indicators, and the observation of the experimental design are also very important from the perspective of music therapy research methods, especially given the small sample size, non-normal distribution, and specific conditions of the experimental design. Students can learn about the psychometric indicators and methodological applications of psychological tests under special conditions in the library's registered catalogs (for pictorial illustration see Figure 4).

Figure 4

Pictorial illustration of the library

Note. Source: own editing

2.4. Shared books

In addition to manipulating musical instruments, folk songs, folk rhymes, children's songs provide an aesthetic opportunity to experience musical self-expression. The methodological music books and song collections shared and presented by Dr. Rocío Chao Fernandez Full Professor at the University include many aspects of folk music, methodology and artistic expression (Chao Fernandez, Mato-Vázquez, 2014; Lopez-Fernandez & Chao Fernandez, 2024).

La música tradicional en Galicia, desde la tradición oral hasta el contexto educativo (Traditional music in Galicia, from oral tradition to educational context), starts from the fact that traditional Galician music is so popular and widespread that it is necessary to present the historical and contemporary aspects of the songbook. The publication organizes and categorizes song material based on interviews and cross-sectional explorations (López-Fernández & Chao Fernández, 2024). Key concepts such as folk and popular music, functional music, oral tradition, etc., are used to classify the Galician folk music heritage, in historical perspective and in its current situation, in a series of exploratory and action research, documentary analysis. The songbook presents a wide range of rhythmic and genre groupings to characterize the diversity of Gallic folk music, above all in order to explore the real situation (Lopez-Fernandez and Chao Fernandez, 2024).

Dr. Rocío Chao Fernandez Full Professor at the University presented the main features of the volume, its purpose and the history of its creation. This volume focuses on Galician traditional music and its transmission from oral tradition to formal educational settings. Methodologically, it emphasizes the valorization of musical heritage and its integration into pedagogy, proposing strategies that promote active, meaningful learning that is linked to cultural tradition. Among the most important contributions are 1. exploration of the repertoires and practices of the Galician oral tradition, 2. gendered overview of Galician songs, highlighting the role of women in the transmission and maintenance of musical tradition. The volume's recommendations include adaptation to educational contexts, with didactic suggestions ready for classroom use. In addition, they represent a sustainable relationship between cultural identity, song heritage and musical learning.

As Mullerenes nas artes e nas ciencias (Women in the arts and sciences) is a trilogy, one of which is "O xerme da liberdade" (Seeds of freedom). The volumes present the lives and work of women who have made a lasting and outstanding contribution to society, art and science, defying gender inequality. In doing so, they have undertaken difficult and challenging lives. "O xerme da liberdade" presents all of this based on written testimonies from antiquity to the present day, advocating the principles of dignity and freedom as the most important human rights. Chapter 9 presents individuals who have excelled in music from the Baroque period to the 20th century in the fields of performing arts, composition, dance and architecture (Chao Fernandez & Mato-Vázquez, 2014).

Dr. Rocío Chao Fernandez Full Professor at the University presented the content, purpose and methodological characteristics of the volume. The methodology is grounded in documentary review, enabling the reconstruction of the lives and contributions of women who have historically made significant impacts in the arts and sciences and whose achievements are documented in written records. The book briefly presents famous female figures and personalities from antiquity to the present day, showing how they paved the way through their efforts and perseverance in disciplines traditionally dominated by men, overcoming significant obstacles. The work pursues a dual objective: 1. to make visible – with due recognition – the work of forgotten female authors in the construction of historical narratives, 2. to introduce to younger generations the principle of human dignity and freedom as the basis of all innate rights.

3. CONCLUSION

The ancient form of singing/music-making preceded speech. Even prehistoric man was capable of perception, despite the fact that his cerebral cortex and nervous system were not developed enough to express his thoughts verbally. Singing/music-making preserved its connection with the forms of existence, and in addition to communicating thoughts, it became a source of emotions and self-expression. The developing world of human emotions also made singing multifaceted. The evolving spectrum of human emotions also contributed to the multifaceted nature of singing, giving rise to various types of music, including children's songs, folk songs, laments, heroic songs, and the imitation of natural sounds. In this process, music became a force for community formation as a means of communication (Rager, 2008). This is what we as music educators and researchers can take as a basis.

The Staff Training Mobility type is appropriate for the development of a research topic, for the preparation of observations and analyses. It can also be used to establish a professional relationship and prepare a future cooperation. The music session observed on site is a sound installation. A sound installation is a sound or combination of sounds that creates or derives from an immersive musical environment. The different soundscapes motivate, stimulate interest and imagination, and promote the recognition of differences/similarities. Instrumental improvisation/voice interpretation offers alternative solutions to different social contents/situations and provides a broad spectrum of self-expression. When presenting basic musical forms, playing an instrument can be both a

method and an object of observation. For children, learning is a manipulative, action cognition, through which they gain experience in a complex unity of movement. For this reason, the teacher needs to be able to play an instrument in a safe way that combines it with social content. During their traineeship, students will carry out their teaching experience with the help of a mentor teacher, according to their training form, in an institution linked to the university. If motivated, research topics could include, for example, psychological development, equity and innovation at faculty level. The library has various registered catalogues and Open Access facilities for research. From the perspective of music therapy research methodology, it is an important experience to learn about emotional and social intelligence tests (e.g. Galego et al. 1999), which also measure the socioemotional transfer effect of music. Psychometric indicators familiarized include those that determine statistical calculations (e.g. low sample size, non-normal distribution curve, effect size indicators).

Considering the listed statistical characteristics played a central role in the Hungarian adaptation of the Self-Awareness Test (Gallego et al., 1999), which was created with the help of Dr. Rocio Chao Fernandez Full Professor at University. Hopefully, it will be the beginning of a long-term, fruitful and wide-ranging relationship.

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5. CONFLICT OF INTEREST

The author declares that she is not aware of any conflict of interest that could have modified the results and experiences presented in this study.

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