“How can I include them?” Teaching pupils with visual impairment in the inclusive music classroom

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Abstract: In most cases, music teachers lack specific strategies to give an appropriate response to the educational needs of students with visual impairments. Taking into account the need to find new approaches that are helpful for music teachers to go through the many challenges of inclusion, this article explores the potential that active music methods may have in the inclusive music education of students with visual disabilities. This exploratory study uses qualitative content analysis in combination with a case study method, intending to contrast the resources found in three active music methods (Ward’s, Dalcroze’s, and Suzuki’s) with the real experience of a music teacher. Results include ten resources which promote learning for all students along with the description of how the teacher used them in real life, examples and guidelines to be applied in the music classroom. Conclusions show that the pedagogies analyzed offer a wide range of opportunities for multi-sensory learning through the resources presented –which can also be transferred to other music pedagogies–, and confirm that active music methods facilitate inclusion in environments where students with visual disabilities are present.

Keywords: music pedagogies; visual impairment; inclusion; teaching resources; inclusive strategies.

"COM PUC INCLOURE’LS?": ENSENYAR A ALUMNAT AMB DIFICULTATS VISUALS A L’AULA DE MÚSICA INCLUSIVA

Resum: En la majoria dels casos, el professorat de música no acostuma a tenir estratègies que li permetin respondre a les necessitats educatives específiques de l’estudiantat amb discapacitat visual. Tenint en compte la necessitat de trobar noves estratègies que permetin al professorat enfrontar-
se al repte de la inclusió, aquest article explora el potencial que poden tenir les pedagogies actives d’educació musical en l’educació musical inclusiva d’estudiantat amb limitacions visuals. Aquest estudi exploratori combina l’anàlisi qualitativa de contingut amb un estudi de cas per contrastar els recursos trobats en tres pedagogies actives (Ward, Dalcroze i Suzuki) i l’experiència real d’una professora. Els resultats inclouen deu recursos que afavoreixen l’aprenentatge de tot l’alumnat juntament amb la descripció de com foren usats per la professora, a més d’exemples i orientacions per ser aplicats a l’aula. Les conclusions mostren que les pedagogies analitzades ofereixen una gran varietat d’oportunitats d’aprenentatge multisensorial a través dels recursos presentats (que, a la vegada, poden transferir-se a altres pedagogies musicals), i confirmen que les pedagogies musicals actives faciliten la inclusió en contextos amb alumnat amb discapacitat visual.

**Paraules clau:** pedagogies musicals; discapacitat visual; inclusió; recursos pedagògics; estratègies inclusives.

**“¿CÓMO PUEDO INCLUIRLOS?”: ENSEÑAR A ESTUDIANTES CON DISCAPACIDAD VISUAL EN EL AULA DE MÚSICA INCLUSIVA**

**Resumen:** En la mayoría de los casos, el profesorado de música no suele contar con estrategias que le permitan dar respuesta a las necesidades educativas específicas del estudiantado con discapacidad visual. Teniendo en cuenta la necesidad de encontrar nuevas estrategias que permitan al profesorado enfrentar el reto de la inclusión, este artículo explora el potencial que las pedagogías activas de educación musical pueden tener en la educación musical inclusiva de estudiantes con limitaciones visuales. Este estudio exploratorio emplea el análisis cualitativo de contenido en combinación con un estudio de caso para contrastar los recursos encontrados en tres pedagogías activas (Ward, Dalcroze, y Suzuki) y la experiencia real de una profesora. Los resultados incluyen diez recursos que favorecen el aprendizaje de todo el alumnado junto con la descripción de cómo fueron empleados por la profesora, además de ejemplos y orientaciones para ser aplicados en el aula. Las conclusiones muestran que las pedagogías analizadas ofrecen una gran variedad de oportunidades de aprendizaje multisensorial a través de los recursos presentados (que a su vez pueden ser transferidos a otras pedagogías musicales), y confirmen que las pedagogías musicales activas facilitan la inclusión en contextos con estudiantes con discapacidad visual.

**Palabras clave:** pedagogías musicales; discapacidad visual; inclusión; recursos pedagógicos; estrategias inclusivas.

**Introducción**

For the past decades, schools have become more diverse when it comes to children’s capacities and abilities, given the growth of the idea of an inclusive education. This idea has reached the educational music context and thus the need of didactic tools and resources for the inclusive music classroom. Nonetheless, the evolution in the conception of education is occurring at such a fast rhythm that the teachers’ training can -in most cases- not be enough to adapt to these changes nor give the appropriate response to the educational needs of students with visual impairment (Pino, 2022). Considering that inclusive education involves a process that is concerned with the removal of barriers within the classroom (Ainscow, 2020) and given the need
to find new approaches that are helpful for music teachers to go through the many challenges of inclusion, this article explores the potential that the well-established 20th Century pedagogical music methods may have in the inclusive music education of students with visual disabilities.

Achieving inclusive music education for pupils with visual impairment does not require implementing a different program in comparison to sighted students (Sánchez & Muñoz, 2020). Instead, it implies having effective teaching resources and guidelines on how to cope with visual impairment (McDowell, 2010). According to researchers in this field, teaching resources should involve inclusive strategies, specialized materials, and adaptations (Baker & Green, 2016, 2017; Chaves, 2013; Pino & Viladot, 2019; Sánchez & Muñoz, 2020). Some authors agree on the importance to develop the braille music-reading (Coates, 2010; Park, 2014; Chaves, 2014; Baker, 2014), and while we are aware that this is a controversial issue that generates a lot of debate in this discipline, it should be noted that music notation is not the only way to learn music. Hence, we are on the side of authors such as Baker and Green (2017) and Pino and Viladot (2019), who agree that ideal music education for all students (sighted or with visual impairments) would surely include learning how to play both by ear and from a score (e.g. braille music, large-print formats, talking scores, etc) with no pressure to pursuing one method only.

Inclusive music education means anticipating the needs of all possible students who might attend the school (McCord, 2017), paying special attention to the procedures of music teaching that guarantees the presence, participation and learning of all the students in mainstream settings (Díaz & Moliner, 2020). Thus, according to Thompson (1999), music educators should become aware of the multiple possibilities they have and must provide a greater number of hands-on activities, multi-sensory experiences, repetition and practice to ensure successful learning for all students. Accordingly, active methodologies engage students in the learning process through activities in the classroom, instead of passively listening to the teacher (Freeman et al., 2014), and offer a wide range of learning possibilities to students (Farrés, 2021). Supporting this idea, Obaid (2013) claims that activities that harness all the senses are an excellent way to include learners with disabilities.

In the field of music education, recent studies have been done on how the well-established 20th Century pedagogical music methods – also called active music education methods (Aycan, 2018) - can support inclusive music teaching for students with special educational needs (Salmon, 2016; Sutela et al., 2016; Habron, 2014). These pedagogies (i.e. Kodály, 1965; Ward & Perkins, 1920; Willems, 1954; Jaques-Dalcroze, 1912; Suzuki, 1983, Orff & Keetman, 1950) contain multi-sensory resources that may be combined to support individuals permanent learning (Aycan, 2018), giving freedom to teachers to choose which method could be used according to the possibilities of the students. According to Rau et al. (2020), multi-sensory approaches have been proved to be more effective than unisensory learning. These approaches, which answer to the fourth principle of Universal Design (Centre for Universal Design, 1997), allow to communicate necessary information by giving students the opportunity to learn from not only visual but also auditory, kinesthetic and tactile information (Rau et al., 2020), making learning richer and more motivating for students (Obaid, 2013).

Jaques-Dalcroze (1930) exposed the benefits that active music pedagogies may have with people with visual impairments, pointing out orientations for their tactile sensibility and auditory faculties in relation to space and muscular sense. Active music pedagogies, when used with students with visual disabilities, help to interiorize theoretical concepts and to develop
harmony, melodic and rhythmic notions (Hermosín, 2019). Therefore, considering that effective music methods are required to improve music education systems (Türkmen & Gençü, 2018), it becomes apparent that the multi-sensory resources found in these well-established music pedagogies need to be considered in music teachers’ training. With that in mind, we pose the following question: which multi-sensory resources, drawn from the active music education methods, can a music teacher use in order to include and involve students with visual disabilities inside the music classroom?

Some of the resources presented in this article take sight as a natural part of the musical learning within a mainstream music classroom. Nonetheless, it should be reminded that sight can be combined and even replaced with other ways of music learning such as listening, singing, moving, and using tactile approaches. Consequently, in this study our focus is placed specially on experiential learning. All in all, the greater the variety of resources is, the more inclusive the classes will be (Thompson, 1999).

The purpose of this paper is to contrast the experience of a music teacher with the multi-sensory resources found in the active music pedagogies, describing how they were used to teach a blind student in an inclusive way, and providing examples for real application. This is an exploratory study that forms part of a larger project that proposes to acknowledge the key aspects that should be taken into account in the music teacher training in the context of inclusive music education for students with visual impairments. Therefore, in this article, our ultimate goal is to provide useful and applicable orientations taken from an experienced teacher and from three analysed music pedagogies, so they can be applied by music educators in their day-to-day classrooms to work inclusively with groups where pupils with visual disabilities are present.

1. Method

This study involved an analysis of three well-established music pedagogies and their comparison with the real case of an experienced music teacher who used these pedagogies for 14 years with a student who was blind. To meet the aforesaid objective, a qualitative content analysis (Mayring, 2000) was performed in combination with a case study (Stake, 1994; Yin, 2003) in four stages that are explained below. The information was gathered through a document examination and an interview.

1.1 The music pedagogies

An exploratory review was carried out of three compilation documents (Díaz & Giráldez, 2007; Fontelles, 2021; Martí, 2016), seeking the points in common among the characteristics of the 20th Century well-established music pedagogies. Musical Methodologies (Fontelles, 2021) is a document where the most relevant and influential methodologies of the 20th and 21st centuries appear, describing the most remarkable features and traits of each music method. Aprendizaje musical para niños: metodologías y sistemas pedagógicos de la didáctica musical (Martí, 2016) is a book in which the essential features of the main music teaching pedagogies are explained, together with their educational advantages for children’s learning. The book Aportaciones teóricas y metodológicas a la educación musical: una selección de autores relevantes (Díaz & Giráldez, 2007) is a compilation of writings of the most relevant 20th Century music education
pedagogues and researchers, which includes a comprehensive overview of the main theoretical and methodological contributions of each pedagogical approach. Also, in order to gain more in-depth knowledge about the music methods, the review included the original books of some of the most relevant music education pedagogues of the 20th Century (Jaques-Dalcroze, 1912; Kodály, 1965; Orff & Keetman, 1950; Suzuki, 1983; Ward & Perkins, 1920; Willems, 1954).

For this review, three pedagogies were chosen regarding the possibilities they present: Ward’s, Dalcroze’s and Suzuki’s (see Table 1). During the selection process, it was taken into consideration the pedagogies’ core objectives, the diversity of resources they use (i.e. visual or sensory resources) and how they approach music learning (e.g. reading music scores, listening to music or moving along to it, etc). The final decision to choose these pedagogies was based on the fact that they do not necessarily involve the use of musical notation during the learning process, and they defend that music should be learned involving elements such as movement, audition and singing. Also, they use a great number of senses to achieve the desired objectives, which can make an alternative for music teachers to work in inclusive contexts with pupils with visual impairments.

<table>
<thead>
<tr>
<th>WARD</th>
<th>DALCROZE</th>
<th>SUZUKI</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CORE OBJECTIVES</strong></td>
<td>To extend musical education to all students in the compulsory education.</td>
<td>To develop physically, socially, affectively and intellectually.</td>
</tr>
<tr>
<td><strong>RESOURCES AND APPROACH</strong></td>
<td>- Vocal and auditory formation are possible thanks to the imitation of the teacher and later reflection and practice. - The learning takes place through repetitive audition. - Auditory learning can be evaluated through melodic dictations (written or oral).</td>
<td>- Through body movement, pupils create a base for the learning of multiple musical elements - The learning involves both improvisation and teacher guidance. - Group lessons allow socialisation, integration, adaptation and learning through imitation.</td>
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Table 1. The chosen music pedagogies and their main characteristics.

1.2 The experienced teacher

The experience of a teacher was collected through a semi-structured interview, to see the real use of the methodologies from the perspective of a music teacher in a regular primary school in Catalonia (Spain). Before the interview, the teacher was informed that her answers would be part of a study and that the collected information would be treated anonymously. The interview was designed to learn about the teacher’s experience using these pedagogies with a student with visual impairment and to gather the procedures used in day-to-day classroom activities. She was asked what resources she relied on to answer the specific needs of the visually impaired student, what adaptations she had to apply to the active music methods to work
with this group, what specific actions she made to include the blind student when using the different active music methods, what were the objectives established for this student to achieve in comparison to his peers, and how frequently was used sight, hearing and movement with this group. The interview was audio-recorded, lasted 42 minutes and was transcribed.

This teacher had the experience of teaching a student with a visual impairment from the age of 3 and until he turned 17. The student was blind and had no additional disabilities. The teacher had a university degree in Teaching and Pedagogy with a specialization in Music. She took several courses of the mentioned 20th Century music pedagogies including Orff’s method, Suzuki’s method and a variant of Dalcroze’s method in Catalonia (Joan Llongueras’ method). All this knowledge provided her with a wide range of resources to use in the classroom, that she could put into practice with the boy who was blind, as well as with his classmates. Moreover, both the teacher and the student were trained in braille music and the student was able to write and read music scores.

2. Data analysis and results

The analysis was divided into two parts. First, based on the data found within the mentioned documents, a qualitative content analysis (Mayring, 2000) of the chosen pedagogies was done to see if these could give useful resources to teachers for the inclusion of students with visual impairments. Considering that the chosen methods (Ward, Dalcroze and Suzuki) involve other senses apart from sight to achieve musical learning, the analysis was done on the basis of the following question: which multi-sensory resources, drawn from the active music education methods, can a music teacher use in order to include and involve students with visual disabilities inside the music classroom?

Among all the common aspects found within the three pedagogies, ten resources were chosen according to how frequently they were mentioned, their relevance in respect of every method’s main goals, the similarities among them, the most remarkable traits of each of them and, mainly, the possibilities they provide for multi-sensory learning. These common resources involve a variety of learning opportunities and, for this reason, are which best show the inclusive character of the chosen music pedagogies (see Figure 1).
At the end of the first stage, a revision was done of how each resource is used by the pedagogical methods during the music learning process. In order to facilitate the subsequent comparison of the pedagogies’ characteristics, this information was organized in a comparative table with the name of the resources and, consecutively, with the information about how every music pedagogy makes use of each resource.

The second stage consisted of the analysis of the interview. The information provided by the teacher comprised her pedagogical experience with the boy with visual impairment and included relevant activities and procedures from the active pedagogies used with the student. The data was organized in the common resources found in the active music methods (see Figure 1) and, in order to gain a thorough understanding of these resources, a description was made following the case study method (Stake, 1994; Yin, 2003) by explaining the strategies, adaptations and materials used related to every resource in the teacher’s real-life context.

Finally, by means of a qualitative content analysis (Mayring, 2000), the information of how the teacher made use of the resources was confronted with the results obtained from stage 1 (the use of every resource by the analysed music pedagogies). As a result of this process, a description of how every resource was used by the teacher is done below, indicating the points where the teacher’s experiences coincide or differ from the information provided by the active music methods. Also, examples for real application are provided.

2.1 The use of imitation

The teacher used imitation, although not as a reflexion and enlargement of the movement (Ward), as a learning tool to imitate each other’s movement (Dalcroze), or as a way of learning to play by imitating the educators’ movements (Suzuki), which would have required the student to visualise what the teacher or a peer was doing. Instead, what the teacher did was always verbalising what she was doing for this student to follow the lessons and imitate what she had done. Afterwards, while he was performing, she would correct him (if necessary).

2.2 The use of improvisation

The teacher used improvisation like Ward (e.g. through games and creation, including elements that had already been worked), and Dalcroze (i.e. as a learning objective, to show the musical learning acquired). She used simple improvisation exercises with the whole group and emphasised working on creation with the student who was blind, especially at higher levels (secondary education). She gave him more guidelines and time so that he could find his personal resources to express himself and share his creations with his classmates. The creative process was usually worked by groups to provide him with assistance if needed, as well as to promote empathy among the class.

2.3 The use of repetition

The teacher used repetition like Suzuki for the student to be able to acquire a good performing technique with the recorder and with percussion instruments, always using muscular memory (music notation was not employed in these activities). She would take his hands and guide him through the instrument and then ask him to repeat what she had done using muscular memory.
2.4 The use of space

The teacher used space like Dalcroze (i.e. learning to use it in relation with the motor and sound phenomena) by including dance and movement constantly in the music class. The floor remained clear for the student with visual impairment to move more freely, although he was always accompanied by a peer.

2.5 The use of singing

The teacher used singing like Ward (i.e. singing many popular songs) and like Dalcroze (e.g. using voice practice to reinforce the consciousness of musicality). Singing activities were carried out in the classroom very often for which the student had to accomplish the same objectives as his peers. Once again, the teacher had to verbalize when was the appropriate time to start singing or which musical structure she would follow while conducting.

2.6 The use of music notation

The teacher used music notation like Ward (i.e. introducing it when the pupils were ready, and using it to develop the hearing through written melodic dictations), and like Suzuki (increasing its complexity as the years went by). The teacher did not use this resource too often and established lower objectives for the student regarding reading music scores. The teacher only introduced some musical figures through the braille music system, giving priority to tactile and auditory learning. The same was applied with the rest of the group, using music scores only as another tool and visual support. The music notation was also useful for creations, but completely useless when it comes to performing with Orff instruments or the recorder.

2.7 The use of socialisation in the classroom

The teacher used socialisation like Dalcroze (e.g. to develop the capacity of learning in groups), and like Suzuki (i.e. as a motivation for studying with other students), so that the student who was blind could learn from his peers as well as teach them with his outstanding abilities. He learned some of the musical language his peers used (through tactile graphics representing the notes and rhythms) but also taught them braille music. The student always participated in the same activities and, later on, during secondary education, he could participate in group work as all his peers. He was always accompanied by one of his peers during the whole music lesson.

2.8 The use of the body

The teacher used the body like Ward (e.g. as a tool for the interiorisation of the rhythm, and to improve intonation), like Dalcroze (i.e. to transmit musicality, to create or strengthen the inner image of sound, rhythm, the height of notes or structure), and like Suzuki (e.g. to develop psychomotor abilities, and muscular memory). Mainly, she used the body as a tool to express music and also to experience with the manipulative materials created for this student. Moreover, musical language was approached through dance. She created manipulative materials to represent musical elements such as the height of notes or their length; for example, pupils could get a better understanding of the lengths of notes by pulling different ropes from a box while making a continuous sound and comparing the sounds obtained. Materials like this (see Figure 2) became useful not only for the student who was blind but for his peers as well.
2.9 The use of hearing

The teacher used hearing like Ward (e.g. as a tool to develop singing abilities, and for presenting melodic dictations with an oral response instead of a written one), like Dalcroze (i.e. doing audio motor exercises to develop inner hearing), and like Suzuki (i.e. listening regularly to the music that would be performed in order to internalise it). This resource was enhanced by this teacher and the objectives related to hearing abilities established for the student with visual impairment were higher, particularly regarding timbre recognition, which he had really developed.

2.10 The use of sight

The teacher used sight like Ward (i.e. interrelated with hearing and voice practice, and to train musical reading), like Dalcroze (i.e. as a tool for imitation of movement), and like Suzuki (i.e. to learn from seeing others play). However, it was avoided by the teacher and when used, was only another tool for apprenticeship that could be useful for a vast majority of the pupils. The learning with this group, in which she also taught a student who was blind, was more sensory and manipulative. The concepts the teacher had to introduce in the class were transformed into something tangible and audible and not many written materials were used.

3. Suggested adaptations from the music pedagogies

Finally, on the basis of each one of the resources explained above and supported by the real inclusive adaptations made by the teacher, it is suggested that a few general adaptations for achieving an inclusive environment be considered when using Ward’s, Dalcroze’s and Suzuki’s music pedagogies with pupils with visual impairments. The suggested adaptations, each of them associated with learning objectives that may be worked at inclusive music classrooms –using these methods–, are presented in Table 2.
Discussion and conclusions

This article covers two topics that had been scarcely studied together in the literature: the inclusive music education of students with visual impairments, and the well-established 20th Century pedagogical music methods. In this exploratory study, both topics are worked together to examine the teaching possibilities that the active music pedagogies can offer to work when
children with visual impairments are involved. As a result, ten multi-sensory resources extracted from three active music methods (Ward, Dalcroze, and Suzuki) are presented to show how these resources can be applied in a real-life context.

As can be evidenced by the testimony of the teacher, we confirm that the active music methods presented in this study offer a wide range of learning possibilities (in line with Farrés, 2021) by offering multi-sensory resources that allow students to learn music not only from visual but also from kinesthetic and tactile information (Centre for Universal Design, 1997; Rau et al., 2020). These methods (Ward, Dalcroze, and Suzuki) were helpful not only for working with the pupil with visual impairment but also with the rest of the students, who greatly benefited from more experiential learning. In this sense, we agree with Salmon (2016), Sutela et al. (2016) and Habron (2014) that active music methods can support inclusive music teaching when working with students with visual disabilities. Also in a general way, with this experience we can confirm the transformative potential that music education may have for all students as a supporter of inclusion (Alsina et al., 2020).

Although we can affirm that Ward’s, Dalcroze’s and Suzuki’s music methods facilitate the inclusion of pupils with visual disabilities, it is essential that in order to be effective the multi-sensory resources are implemented in combination with specific strategies, adaptations and specialized materials. This ensures the participation of these students in mainstream classrooms (in line with Baker & Green, 2016, 2017; Chaves, 2013; Pino & Viladot, 2019; Sánchez & Muñoz, 2020). Some of the inclusive teaching resources applied by the experienced teacher were: using the verbal description of movement, providing clear guidelines, keeping a safe space for movement, asking peers to accompany the student, using manipulative materials, providing muscular movement guidance, and the transcription of music notation into other formats.

The study confirms, in line with Aycan (2018), that different music methods can be combined to support individual learning in the classroom. In addition, the testimony of the experienced teacher shows that many music educators working with pre-school and school ages may be familiar with these pedagogies. Consequently, the resources presented in this article are not entirely new for teachers and allow them to be aware of the multiple possibilities they already have to ensure successful learning for all students (in line with Thompson, 1999). This is also a reminder that –especially with preschool and school ages– music notation can be used alongside these multi-sensory resources as one more learning tool. And reinforces the idea that meaningful music education for all students includes learning how to play music both by ear and from a score, no matter what the format is (Baker and Green, 2017; Pino & Viladot, 2019).

We agree with Türkmen & Gönçü (2018) that necessary actions should be taken to improve music education systems and, in this way, the results of this work contribute to shape effective music teaching to ensure the development of the musical capacities of all pupils and their apprenticeship in inclusive educational environments. With this study, we confirm that teachers should have effective teaching resources to be able to work in inclusive music settings with pupils with visual impairments (McDowell, 2010). Accordingly, this study presents immediate action and tangible results introduced in the form of guidelines and real-life examples, which can be easily used by music teachers in order to promote the barrier removal from their day-to-day music lessons that is, at the same time, one of the main goals of inclusive education (Ainscow, 2020).
The results presented in this study are helpful to take advantage of the tools provided by the active music methods to work inclusively with students with visual disabilities and, therefore, need to be considered in teacher training programs addressed to both pre-service and in-service music teachers undertaking basic training and continuous professional development programs.

In sum, we agree with Díaz and Moliner (2020) and with McCord (2017), that given their readiness to be used with all students, the findings of this exploratory study promote inclusive music education in the form of teaching procedures that guarantee the presence, participation and learning of all the students in ordinary educative backgrounds. The findings reveal the multi-sensory resources of three well-established 20th Century music methods -which can be transferred not only to other active music pedagogies, but to other music learning backgrounds- as an alternative to encourage the autonomy of teachers working in mainstream classrooms with students with visual impairments. This approach paves the way for future research about the teaching-learning resources and guidelines needed to work in an inclusive way with these students, taking as a basis the potential that the existing active pedagogical methods may offer in pre-school and school music settings.

**Referencias**


