



Inclusion in the school environment involves the presence, participation and learning achievements of all students. It is also focused on well-being: we could hardly describe an unpleasant experience as inclusive. Technological and also organisational advances in recent years have facilitated the inclusion of deaf students in ordinary schools, and specifically in the music classroom in Infant and Primary Education. This has led to the fact that in Catalonia, and elsewhere, the first inclusive factor mentioned, classroom presence, is already a situation assumed as normalising provision for diversity.

FINALIST FOR THE 2020 FIAPAS AWARD

The **inclusion** of deaf students in music class

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Given the new reality that has emerged in recent decades, one may ponder the current state of the question: how well deaf students are included in musical education in our schools, and what actions, resources or strategies are conducive to this. An initial response to these questions from the approach of Universal Learning Design ('Diseño Universal de Aprendizaje', or

'DUA') is the objective of the doctoral thesis "The inclusion of deaf students in the music classroom in Infant and Primary Education", directed by Dr. Pedro Jurado de los Santos, defended at the Autonomous University of Barcelona in 2019 and selected as **finalist for the 2020 FIAPAS Award**. This work is published openly *online* in the regular repositories.

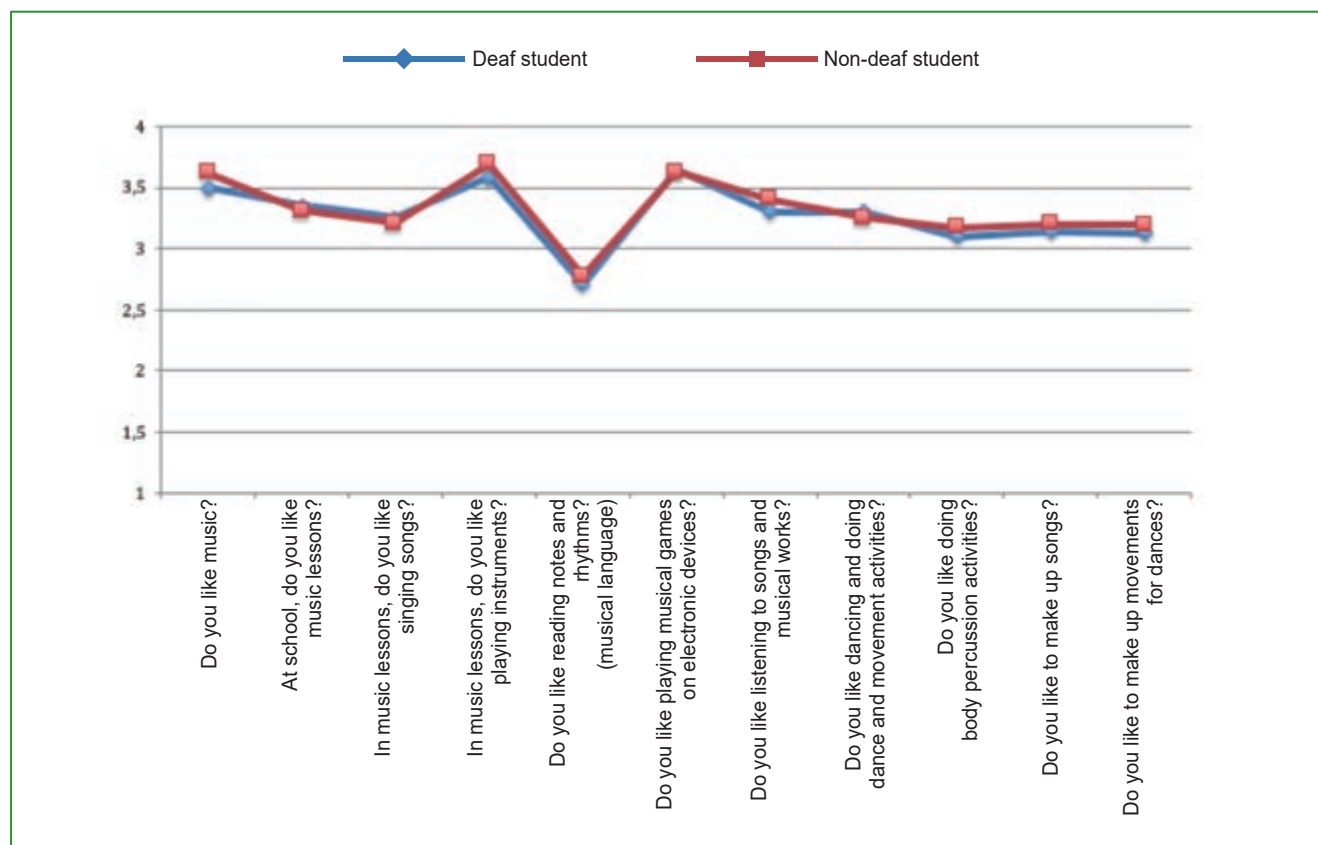
In this research, students and teachers from 28 Catalan schools answered the IASAMIP questionnaires, in which they assessed the degree of enjoyment, participation and achievement in the different music activities and content. Teachers also provided their insight into the difficulties they encounter in the music classroom in terms of inclusion, their strategies, resources and classroom conditions. The participants totalled 49 students with deafness of any kind and degree, 596 classmates without deafness, and 34 teachers.

Equal enjoyment of music activities for all children

The statistical analysis of the data obtained has yielded remarkable results, such as the practical equality between the means for enjoyment among the populations with deafness and without deafness in the typical music activities at the school:

Deaf students have a preference for instrument activities, music games with electronic devices and dance and movement activities, while indicating less enjoyment of musical language

These values indicate that there is no statistically significant difference between the two populations in terms of enjoyment of music activities. Although, of course, individual tastes differ in each person, who may enjoy the proposed activities more or less, regardless of their degree of hearing, these results suggest that deafness does not necessarily mean less enjoyment in school music practice. Students with deafness generally have positive attitudes towards



Graph 1. Means of the scale of enjoyment of deaf and non-deaf students.

music and music class: they enjoy and participate in it. They have a preference for instrumental activities, music games with electronic devices, and dance and movement activities, while noting a lesser enjoyment of musical language activities. In terms of achievement and participation, teachers do see differences in some activities: vocal interpretation is generally the most difficult, while differences are smaller in dance and movement, and creative activities.

These results point to the suitability of enhancing active teaching-learning processes, based mainly on the use of the body, movement and musical instruments, as well as giving greater presence to creative activities. In short: starting out from life experiences before continuing to more abstract content.

Factors involved in greater inclusion of pupils with deafness

As regards the factors involved in the greater inclusion of students with deafness, the importance of early detection of deafness, early placement of the prosthesis, early educational care (which in Catalonia is structured through the CREDA services) and the promotion of symmetrical hearing, with bilateral implantation or by providing a bimodal prosthesis where appropriate.

The type of hearing prosthesis reveals no significant differences in the participation and enjoyment perceived by teachers. Nor is there a clear trend in terms of achievement. This, together with the great variability between individuals, leads to the assertion that the type of hearing prosthesis does not necessarily determine the difficulties of students or the

strategies of teachers. Teacher training and individual knowledge of the students are thus needed so as to be able to use appropriate strategies, regardless of whether a student uses a cochlear implant or hearing aid.

The relationship between language skills and musical skills was evident in many areas. Also the relevance of communicative teaching strategies that place the emphasis on facilitating the intelligibility and understanding of the message and vocabulary. There is a two-way relationship between oral language and music: on the one hand, language skills make it easier to perform activities, understand the explanations or lyrics of the songs, participate, express ideas or sing. On the other, music education helps work on aspects of language such as prosody and lexicon, and improves speech perception.

In terms of human resources, the work of MALL (Hearing and Language Teachers) and speech therapists is highly valued. Regarding technological resources, the use of FM devices in the classroom is recommended, given the benefit they provide.

Given the relationship that teachers perceive between enjoyment, participation and achievement, one may presume that scheduling fun and participatory activities also fosters greater achievement, which may in turn can result in greater fun and participation. This virtuous circle can be activated by teachers, who have great influence in keeping deaf students motivated and involved. The students' responses set out three motivational axes that determine their taste in activities: *fun-boredom*, *learning/achievement-frustration/non-achievement* and *rewarding physical sensation-unpleasant physical sensation*:

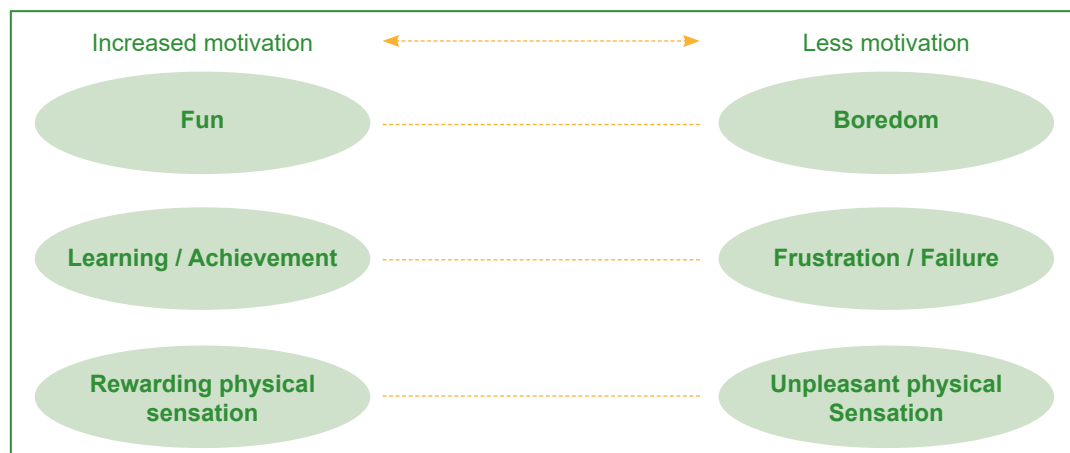


Figure 1.
Motivational axes.

According to these axes, to support the emotional dimension of learning, fun activities should be promoted, reinforcing the perception of learning over frustration, and producing rewarding physical sensations. Greater enjoyment is promoted on the basis of the interests and activities that students enjoy most, and by basing learning on active and living methodologies. Frustration can be alleviated by planning activities in accordance with progressive complexity in the content, not penalising errors and allowing support, anticipation and parallel work on content. The rewarding physical sensation is achieved by minimising annoying elements such as noise produced by inadequate classroom acoustic conditions, the annoying timbre of some instruments, or inadequate group participation dynamics.

The problem: noise and reverberation

Noise and reverberation in classrooms is a notable problem. It is advisable for the authorities responsible for schools to ensure optimal acoustic conditions, with minimal noise and reverberation, which would benefit all students.

Other relevant factors within the teaching performance domain are training and knowledge of the students, the curriculum dimension, and the resources and strategies employed.

In this last area, one should emphasise the importance of strategies related to ensuring correct placement in class, communicative strategies of teachers, ensuring understanding of the message, anticipating and reinforcing content, familiarity with this content, the use of visual and gestural resources, the involvement and awareness of classmates, the use of dramatisation as a resource, basing learning on movement, body expression, dance and living activities, such as instrument practice, adjusting the piano accompaniment and tessitura of songs according to the auditory conditions of the student, and the use of gestural or mimed songs. All these strategies are beneficial to all students, whether deaf or not, along the lines promoted by the DUA system.

The data obtained in this and other research coincide in that music is a very beneficial activity for students with deafness, who also enjoy it as much as students with normal hearing. Their active participation in the school's music activities is therefore important. To optimise their achievements and



minimise negative experiences, it is essential that they be based on experimentation, live experience and active and social learning, using the wide range of strategies and resources available to ensure the fun and positive experience that any music practice should be.

The type of hearing aid shows no significant differences in terms of participation and enjoyment perceived by teachers

The large number of variables analysed in this paper gave rise to other results that for reasons of space cannot be listed in this article. Those interested in further analysis can consult the complete doctoral thesis at: <http://hdl.handle.net/10803/670159>. The document also includes a compendium of guidelines for educational action in the music classroom, three questionnaire formats, and DUA guidelines adapted for a classroom with deaf students. The questionnaires can be used in research or as a guide for self-assessment and improvement of teaching performance in the classroom. The definition of the DUA guidelines, given their philosophy of universality, is of benefit to all students, regardless of their hearing conditions. 




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*SPANISH CONFEDERATION OF
FAMILIES OF DEAF PEOPLE*

Article in No. 176 of the FIAPAS Magazine.

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English translation 2021 financed by



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