



Students with special educational needs in the music classroom. Experience and teacher training in inclusive education


Vicenta Gisbert Caudeli

Universidad Autónoma de Madrid ✉ 

Sara Navarro Lalanda

Università Europea di Roma ✉ 

Marta Vela González

Universidad Internacional de La Rioja ✉ 

<https://dx.doi.org/10.5209/reciem.85719>

Received: 18 January 2023 • Accepted: 17 October 2023.

Abstract The incorporation of students with special educational needs in the music classroom is an important challenge for specialist teachers. This research focuses on the perspective of music specialists in all their aspects: general education, conservatory, state schools and university. This work's objectives are to establish what experience and training in inclusive education teachers have, to quantify the skills their students acquire and to establish teachers' perception of their training needs in this regard. The sample comprises a total of 94 specialist music teachers from the island of Tenerife (Canary Islands, Spain). It is a mixed study with selective and cross-sectional design. The data collection used an ad hoc questionnaire submitted to expert assessment. The questionnaire has three sections: one on socio-demographic aspects; another on skills acquired in the music classroom, which uses a Likert-type scale; and a final qualitative one that investigates practices, attitudes and improvements in teacher training. This work concludes that there is an evident need for training to provide better attention to students with special educational needs, who are increasingly present in music classrooms. Participants agree on the need for ongoing training to incorporate up-to-date and effective resources.

Keywords: music education; inclusion; teacher training; teaching experience; special educational needs students

ES Alumnado con NEAE en el aula de música. Experiencia y formación del profesorado en inclusión educativa

Resumen: La incorporación del alumnado con NEAE en el aula de música supone un importante reto para el profesorado especialista. Esta investigación se concentra en la visión del profesorado en música en todas sus vertientes: enseñanza generalista, Conservatorio, Escuelas Municipales y Universidad. Los objetivos de este trabajo se han centrado en conocer la experiencia y formación del profesorado en educación inclusiva, cuantificar las destrezas adquiridas por su alumnado y averiguar su percepción sobre sus necesidades formativas al respecto. La muestra está conformada por un total de 94 docentes especialistas en música de la isla de Tenerife (Canarias, España). Se trata de un estudio mixto con diseño selectivo y transversal, la toma de datos se ha realizado mediante un cuestionario ad hoc sometido a criterio de expertos. El cuestionario tiene tres apartados, uno dedicado a aspectos sociodemográficos, otro sobre destrezas adquiridas en el aula de música que se ha diseñado a modo Likert y el último con carácter cualitativo donde se indaga sobre prácticas, actitudes y mejoras en la formación docente. Se concluye con una evidente necesidad formativa para proporcionar mejor atención al alumnado con NEAE, cada vez más frecuente en las aulas de música. Los participantes coinciden en la necesidad de formación permanente para incorporar recursos actualizados y efectivos.

Palabras clave: Educación musical; Inclusión; Formación profesorado; Experiencia profesorado; alumnado NEAE.

Summary: 1. Introduction. 1.2. Students with special educational needs in the music classroom. 1.3. Training for specialist music teachers relating to students with special educational needs. 1.4. Inclusive education. 2. Methodology. 2.1. Results. 3. Conclusions. 4. References.

How to cite this article: Gisbert, V.; Navarro, S.; Vela, M. (2023) Alumnado con NEAE en el aula de música. Experiencia y formación del profesorado en educación inclusiva, en *Revista Electrónica Complutense de Investigación en Educación Musical*, 21, 109-118. <https://dx.doi.org/10.5209/reciem.85719>

1. Introduction

The term inclusive education can be defined in opposition as anything that reduces or eliminates exclusion in the classroom. As such, inclusion seeks to ensure that every person will receive a quality education in which the students' educational process is adapted in accordance with their own distinctive characteristics (Quesada, 2021). This process started in the USA and Europe in around 1980, at first focussing on attention to students who face challenges. These include cognitive, sensory and physical diversity, and in recent decades religion, ethnicity, gender, ability, pace of learning, disadvantaged backgrounds and more have been included with the intention of promoting an accessible education (Infante, 2010; Qvortrup & Qvortrup, 2018; Francisco *et al.*, 2020).

The terms special education, exclusion, attention to diversity, inclusion, among others, have become more flexible as society and education have advanced in a continuous process of social transformation. In this sense, the term liquid society (Bauman, 2015) emerged, referring to the malleability that new generations need to adapt to the rapid changes caused by the break with traditional structures; teachers must adapt to students who have diverse needs, whether because of limitations in their abilities or limitations imposed by their surroundings. The term inclusion appeared linked to special education in 1994, when the need for inclusive schools in which integrate children and adolescents with disabilities was established (Rodríguez & Garro-Gil, 2015).

The search for quality, equal opportunities and equity for diverse groups in learning contexts has driven changes to education laws. The decentralisation of educational policies in Spain means that this matter is a competence of the autonomous regions (Pérez-Gutiérrez *et al.*, 2021) and there is great variety in approaches to inclusion (Ojeda *et al.*, 2019). There is still much to be done to achieve true inclusive education, above all faced with these territorial imbalances.

Previous research has identified a need to define inclusion, along with its standards, concepts and terminology, as well as to quantify its efficacy since there is a large body of theoretical and philosophical literature but few publications refer to the results obtained from this inclusive education (Francisco *et al.*, 2020). Some authors present inclusion as something that is enriching and beneficial for society as a whole, showing human diversity as an important factor that must be considered in continuous teacher training (Quesada, 2021; Pareja de Vicente *et al.*, 2020).

Inclusive education must be embedded by the educational community and throughout the curriculum, thus enhancing participation, coexistence and tolerance, both inside and outside the classroom (García-Navarro *et al.*, 2022). Emotional engagement, belonging to the group, participation in processes of planning projects and learning competences are signs of an inclusive classroom facilitated by teachers who are committed to active methodologies (Muntaner-Guasp *et al.*, 2022).

We use the term students with special educational needs (SEN) to refer to students who receive an intervention outside the mainstream classroom (individually or in small groups) and count with support staff. Students who are refugees, immigrants or in situations of socio-economic vulnerability must also be included (Pérez-Gutiérrez *et al.*, 2021). This group also includes Learning Difficulties (LD), Attention Deficit Disorder (ADD) and Attention Deficit Hyperactivity Disorder (ADHD), when they display Special Personal and School History Conditions, owing to late entry to the educational system or high intellectual abilities, or when language and communication issues are noted that require support in specific or general aspects of their educational process.

The educational authorities are responsible for designing measures to identify students who require specific attention and for providing qualified specialists who have the necessary means and material to guarantee their integration and inclusion (Ministerio de Educación y Formación Profesional, n.d.). Recent research has underlined the benefits of co-teaching, where support and general teachers are involved cooperatively in individualised attention for the whole group, promoting the design of multi-level dynamics (Pérez-Gutiérrez *et al.*, 2021).

1.1. Students with special educational needs in the music classroom

Inclusive education is a constant and dynamic process of transformation. It is a process that facilitates attention for students, starting with their needs and guaranteeing their development and learning. Music, as something that helps improve attention and cognitive and emotional aspects, also provides learning in values and improvements in expression and communication (Gisbert & Tizón, 2022). The music classroom can be a space for identifying and respecting differences, creating a cooperative environment where social skills can be developed through interaction and where everyone can feel valued for their contributions (Terziyska, 2020).

Some sectors of the population are marginalised in music education, either because of its theoretical-technical difficulty or because of their social and/or cultural limitations or physical constraints. The

accessibility of musical instruments can be improved by incorporating digital resources, thus contributing to the individual empowerment that musical practice and creation provide. Adapting musical instruments facilitates inclusive musical learning; it allows students with diverse characteristics to perceive music, express themselves through music or develop their creativity through musical composition (Frid, 2019).

Musical learning has also incorporated technological resources to provide flexible tools that can be adapted to students' characteristics, in both the comprehension and creation of musical content. It is possible to listen to passages of music, with or without accompaniment, and share, disseminate or communicate aspects relating to musical dynamics to groups comprising participants with diverse characteristics, thus facilitating interaction between them and also in social networks (Calderón-Garrido *et al.*, 2019; Serrano *et al.*, 2022). The effort to stay up to date is especially important to be able to make pedagogical use of innovative tools and resources that contribute to improving the teaching-learning process: musical accompaniment programmes and soundtracks, audio and video, MIDI keyboards, digital whiteboards or tablets, among others (Monteagudo *et al.*, 2017).

Technology makes it possible to access training content that provides different stimuli for people with functional diversity (visual, auditory, motor and cognitive) (Orozco *et al.*, 2017). New educational currents seek to improve competences and music becomes an ally, beyond artistic competence, enhancing creative, research, analytic and reflexive skills. Musical practice favours the real application of activities, as its dynamics promote participation and critical thinking (Ramos *et al.*, 2017). Musical learning becomes something that strengthens skills and abilities with which knowledge from different areas can be accessed, and so it is interesting to provide flexible educational scenarios where students display an active attitude in their own process of learning (Cabero-Almenara & Ruiz-Palmero, 2018).

Students with special educational needs should be incorporated and included in mainstream schools whenever possible, and so measures for attention for diversity in the classroom must be provided. Accessing and staying in the educational system are prioritised, drastically reducing exclusion and discrimination. Equity, inclusion and compensating for inequalities must be promoted (Sabbatella & Del Barrio Aranda, 2021), as must considering the need to incorporate music therapists to contribute to improving attention for students with special educational needs. The teaching team must collaborate with music therapists to promote curriculum adaptation dynamics and inclusive proposals that facilitate equality of opportunities through musical practice (Sabbatella, 2014).

Recent studies in Spain show that rejection of students with special educational needs in the classroom increases as they advance in age and school level. This could be because of the current situation, support for students with special educational needs is provided in the centre but its implementation involves separating the recipients from the class group (Rodríguez-Gudiño *et al.*, 2022). In each autonomous region (in line with its own education legislation), following educational psychology assessment of students who require this attention, a decision is made about whether students with special educational needs will attend a mainstream school (this may be in a class attached to the same centre, whether in a mainstream classroom or in a specialist classroom, among other similar terms) or a special education centre (Martínez-Abellán *et al.*, 2019).

1.2. Training on students with special educational needs for specialist music teachers

There is a clear need to provide training and means of staying up to date that enable progress in the adaptation of music education to guarantee real inclusion in the music classroom for students with diverse characteristics. Both the initial training of future teachers as well as their continuous training must be considered if we wish to increase the development of pedagogical-musical competences that facilitate the adaptation of the music education process for students with special educational needs in an inclusive music classroom (Gu & Hwang, 2019). Resources, tools and strategies that permit quality teaching activity are needed. One of the first aspects to take into account is undoubtedly identifying needs, something that makes it possible to direct and readjust actions to favour students' participation and achievement of objectives in the music classroom (Lafuente & Jurado, 2018).

We have encountered a trend that is based on multiplicity both in motivational aspects, and in representation, expression, and action. This approach derives from the principles of Universal Design for Learning (UDL) and seeks to guarantee access to education for people with sensory limitations (Cast, 2011; Delgado-Valdivieso, 2021). Some examples where the principles of UDL have been followed can be found in a recent musical project that pursued effective attention to diversity and fostered artistic expression and self-regulation (Martínez-Requejo *et al.*, 2022). In other disciplines such as Spanish language, the implementation of UDL has had good results in the academic improvement shown by the students (Tobón, 2020). UDL also seems to improve empowerment in young people with mild intellectual disabilities as shown in a study carried out in the autonomous region of Madrid (Rodrigo *et al.*, 2022).

UDL, as shown in the review by Parody *et al.* (2022), is a vital resource in the search for fully inclusive education. This work, collates the publications between 2017 and 2021, emphasising the need for training for teachers in UDL and information and communication technology as inclusive and innovative tools. UDL promotes the transformation of curriculum design, a process in which it is desirable to anticipate, reduce or eliminate barriers that interfere in the learning process, and to guarantee access, participation and the achievement of objectives by the students. This involves an additional effort to provide flexibility, and achievable alternatives and goals in view of the many levels and varied skills of diverse students (Alba, 2012; Dalmau & Sala, 2015).

An increase in teachers' awareness and understanding is currently apparent that favours reflection and analysis of the reality of the students, knowledge of their individual circumstances and adaptation of the resources to be used, etc. Improvements to pedagogical practices are pursued, with an inclusive focus in which the individual is valued and respected with his or her difference (Delgado-Valdivieso, 2021). The improvement in the learning process of students with special educational needs must be valued because it results in a better learning experience for the whole group, not just students who have particular limitations or conditions. These measures require teachers to be engaged if they are to fulfil their professional duties (Lafuente & Jurado, 2018).

The conservatory, a centre for training specialist music teachers, has been the subject of less research on attention for diversity and inclusion than other music education environments, such as general teaching in its various stages. Some studies from this field have shown the existence of exclusionary behaviours in the music classroom, specifically a hierarchy of merit (Elmgren, 2019). In this particular case, the focus of attention is on the exclusionary demand to access the conservatory or to participate in the most important performances. The search for perfection means that less outstanding students can feel excluded or act in self-exclusionary ways and question their own skills and capacities. These attitudes can restrict their future employment opportunities, conditioning their capacity to self-regulate their learning and leading to them falling into a deep demotivation (Valenzuela *et al.*, 2017).

Conservatory classrooms currently display broad cultural diversity. Very diverse traditions, religions, customs and backgrounds converge in European educational centres, and, yet the colonial European culture prevails, pushing other repertoires and customs to the margins (Ford, 2021). Facilitating access to blended music training could help reduce the economic costs of face-to-face training for students with limited means, and it would also entail an extra effort in the creation of intercultural educational communities that favour reflection and enrichment by cultures other than Western ones (Gammeren & Szram, 2019).

1.4. Inclusive music education

Inclusive music education facilitates access to music education by adapting pedagogical-musical resources and methods to diverse individuals regardless of their interests, limitations, skills or needs (Del Barrio *et al.*, 2019). Musical practice contributes to human development in both the individual and social aspects. Musical learning favours self-knowledge, emotional work, empathetic communication and inclusion in the group from a holistic vision that emphasises improved motivation through artistic expression (Gustau-Olcina & Ferreira, 2020; López-Casanova & Nadal, 2018).

Human construction is facilitated by musical learning, as beyond its artistic dimension it unites socio-cultural and expressive aspects that reinforce self-identity and social participation, contributing to inclusion in the classroom (Totoricagüena, 2021). Active participation in the classroom improves when interaction and experimentation are facilitated by designing proposals that are attractive and interesting for students (Chao-Fernández *et al.*, 2015). Promoting confidence, creativity, sensitivity and emotional expression makes it possible to make the learning process flexible and provide it with meaning, as the classroom becomes a space for interaction in which the connection between individuals is reinforced (Pérez-Aldeguer, 2013).

Inclusion can be limited by social, economic, or legal aspects, and so the creation of spaces where interpersonal ties are reinforced is decisive for self-knowledge and emotional management, and also for learning to respect diversity in the classroom. Musical learning allows students to work on the adaptation and alignment of skills and knowledge (Berciano *et al.*, 2019; Pérez-Archundia & Millán, 2019; Pereira *et al.*, 2019). Progress in music happens in a similar way in individuals who are on the threshold of poverty or social exclusion and in people with different socio-economic levels, and so is an equalising element as improvements are observed in individual and collective skills enabling active incorporation in mainstream settings and settings of social well-being (Dumont, 2018).

The inclusive classroom, regardless of the subject on which it is focussed, starts from the students' needs using a methodology that is active, flexible and related to their interests. Active listening, empathetic communication and resolving conflicts through dialogue to promote good emotional management are especially relevant (Mills & Rielle, 2018). Inclusion is only possible when integral training makes it possible to preserve the dignity, rights, and liberties of those who display distinctive characteristics. For this reason, inclusion requires a commitment to social co-responsibility (Pérez-Archundia & Millán, 2019; Díaz, 2004).

Inclusion should ensure equality of opportunities, psychological empowerment, the elimination of architectural and social barriers, access to resources that allow access to the job market, educational improvement and social well-being (Salvador-Ferrer, 2020; Sebastián & de Mattos, 2020). There is a need for interdisciplinary spaces that enable collective experiences favouring participation, interaction and collective work, and so reinforcing community ties and social development (Pereira *et al.*, 2019).

Full inclusion cannot be achieved while some sectors of the population are at risk of social exclusion or are disadvantaged on grounds of gender, age, background, ethnicity, religion or other factors. The intervention must have the aim of transforming society in search of social justice. The model to follow is that of a society that embraces and values its members, one where their distinctive characteristics are not a burden but instead an opportunity for collective enrichment, a society whose foundations are built on inclusive and cooperative values (Cruz-Flores, 2021).

2. Methodology

This work is a mixed study that uses a dual quantitative and qualitative focus, combining professional and personal aspects through which it seeks to understand the situation of students with special educational needs in the music classroom from a broad teaching perspective including early-childhood, primary, secondary, music school, conservatory or university. To do so, it uses a sample of specialist music teachers who work in different centres in the island of Tenerife (Canary Islands, Spain). The data was collected at a single moment using a questionnaire, and so it is a transversal research project.

Objectives

- Objective 1: to analyse teachers' level of experience and training in students with special educational needs in music classes in the island of Tenerife (Canary Islands, Spain).
- Objective 2: to quantify the skills learnt by students with special educational needs in music classes depending on teachers' experience and training.
- Objective 3: to consider the training proposals for teaching students with special educational needs with the aim of continuing with the advance of inclusive education.

Sample

This research provides an important holistic overview of teachers' perspectives on the phenomenon of students with special educational needs. To do so, it uses a sample of 94 participants in various levels of the education system, linked by teaching music. A random sample of music teachers who, during the first quarter of 2021, were working in Tenerife in the first quarter of 2021 completed the questionnaire. Given the open nature of participation in the study, with the only requirement being to be a teacher who specialises in music, analysis of the sample reveals great diversity.

The nominal variable of gender indicates a prevalence of women (56.4%), with 42.5% men and 1.1% who prefer not to define themselves. With regards to age, a wide variety can be observed in four specific ranges, varying from a young teacher aged under 25 who had possibly recently joined the system, up to an older teacher who may have experienced the emergence and consolidation of inclusive teaching over recent decades. This variance in the sample is apparent in the distribution of academic training by studies completed (licentiate degree 9.6%, bachelor's degree 26.6%, master's 27.7%, doctorate 19.1% and other studies 17%), as well as the shared professional work in different fields of music teaching, as shown in Figure 1. Of this sample of music teachers, 36.8% work in general education at primary or secondary levels, 42.1% in the conservatory, 26.3% in music schools, 10.5% at university level and 2.6% others.

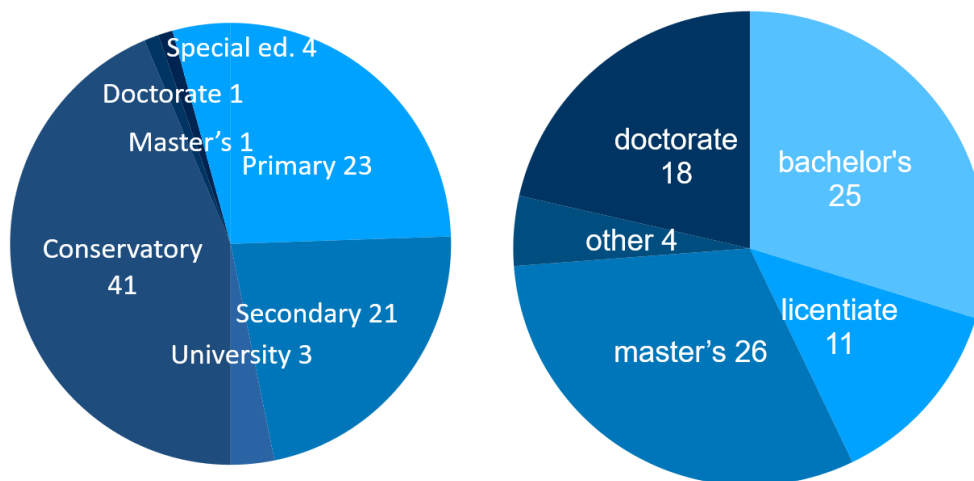


Figure 1. Training of the teachers and professional area

Own elaboration

Three dichotomous variables were also included to analyse the sample: previous experience; previous training; and knowledge of legislation. The results show that a significant proportion of teachers (73.4%) said that there were students with special educational needs in their music classes, compared with 26.6% who reported not having experience with these students. Results relating to previous training in inclusive teaching are more even, with 43.6% of teachers saying they have received this training, compared with 56.4% who said they had not.

This weighting is almost repeated in the section about the autonomous region's legislation, with 44.85% of respondents claiming to have knowledge of it, while 55.15% say they do not. This reflects the broad difference between real experience with this type of student in the music classroom (73.4%) compared with teachers' training (43.6%). Finally, the respondents' level of confidence in inclusive teaching, notwithstanding the parameters analysed above, was medium-low in 58.5 % of cases, compared with a high-very high in the remaining 41.5%.

Design

This work was a mixed study using qualitative and quantitative tools. It presents a correlation of personal and professional variables that seek to provide an overview of the presence of students with special educational needs in the music classroom at different levels of the education system in Tenerife.

A selective and retrospective design with a single group was used, in which the differentiation between dependent and independent variables was theoretical. Data collection, using a questionnaire, took place in a single moment, and so this study has a transversal research design.

Instrument

We used a three-part questionnaire. The first part collected different socio-demographic information about the participating subjects (age, gender, completed studies, professional activity, experience of inclusive teaching). The second comprised a Likert-type questionnaire about skills acquired by students with special educational needs in the music classroom (language learning, cultural diversity, self-knowledge and reflection, and socio-communicative skills). Finally, the third part was a questionnaire that could be analysed qualitatively on teaching practices and attitudes towards the matter being studied, as well as specific proposals for improving teacher training in this essential area of teaching.

Three external experts – one music specialist and two specialists in attention for diversity, all of them with extensive research experience – assessed the questionnaire's clarity, utility and relevance, and decided that the subscale measuring the level of reliability (5 items; Cronbach's $\alpha = .776$) has a considerable level of internal consistency.

We used IBM's SPSS (Statistical Package for the Social Sciences) software to analyse the data.

The research variables are shown below:

- Socio-demographic variables: age, gender, completed studies, professional activity, experience and prior training in special educational needs.
- Dichotomous variables referring to the skills most frequently acquired by students with special educational needs in the music classroom.
- Data about the training needs of teachers relating to students with special educational needs.

Procedure

A sample from various educational settings in the field of music teaching was gathered to analyse various pieces of data regarding the presence of inclusive teaching, as well as the prior training and experience of teachers in this field, based on a questionnaire that was completed in the first quarter of 2021.

2.1. Results

Given the nature of the data, the study largely comprises a correlation analysis of variables using Pearson's r . Accordingly, the influence of two of the dichotomous variables from the sample (experience and training) on other coordinates of the research can be established. We found a strong relationship between gender and experience, $r = .987$; $p = .002$, with considerably more women than men having experience. We also found a clear link between experience and age, $p = .022$; $r = .463$, with older teachers having greater experience of inclusive teaching, as would be expected. The test we used did not show a valid relationship between training and gender or between training and age, with a null relationship between the two main dichotomous variables, experience and training, being displayed, $p = .450$; $r = .213$.

We performed a double linear regression study based on two of the dichotomous variables from the questionnaire to analyse the weight of music skills in students with special educational needs. Consequently, this statistic successively establishes two dependent variables – experience and training – in relation to the predictor variables (the four items evaluated in the Likert-type questionnaire regarding the pedagogical merits of the music classroom for this type of student). Accordingly, the statistic used confirms that there is a relationship between the first dependent variable (experience) and the predictor variables, $p = .047$; $\beta = .495$, and a much stronger relationship between the second dependent variable (training) and the same predictor variables, $p = .003$; $r = .465$. From this, we can deduce, as previous tests have confirmed, that while many of the participants had experience without training, all of the teachers with training had experience of inclusive education.

In the case of the skills that students with special educational needs develop in music classes, two very reliable predictor variables were found in the study that takes training as a dependent variable: self-knowledge ($p = .004$; $\beta = .653$) and socio-communicative skills ($p = .006$; $\beta = .522$). Meanwhile, using experience as the dependent variable gave a different result: languages ($p = .038$; $\beta = .425$) and self-knowledge ($p = .047$; $\beta = .458$). However, the reliability values were much lower and, in the case of the latter result, almost bordered on the null hypothesis. Consequently, the resulting values might have been achieved by chance, as a result of the high margin of error, which is greater than what is permitted. In other words, drawing on the statistical study, the data gathered identify the decisive factors in the acquisition of training (self-knowledge and socio-communicative skills) and in the acquisition of experience (languages and self-knowledge), albeit with numerical values that show a weak statistical relationship in the case of the latter result.

Next, the final part of the questionnaire asked questions that could be analysed qualitatively. Firstly, there was one relating to the practices and attitudes of teachers with regards to inclusive education, which provides two principal topics: realities and concerns of the music classroom with students with special educational needs:

- Participant 67: "I am concerned that students with special educational needs do not receive adequate attention".
- Participant 92: "I am concerned that having students with special educational needs will require more commitment".
- Participant 46: "I am concerned that students with special educational needs are not accepted by the class group".
- Participant 39: "I am concerned that I do not have the knowledge, resources and skills required to cater to students with special educational needs".
- Participant 3: "students with special educational needs should be in mainstream music classes".
- Participant 50: "my relationship with students with special educational needs tends to be brief".
- Participant 72: "I feel a certain limitation when interacting with students with special educational needs".
- Participant 8: "It is important that students who need a curriculum adaptation participate in music lessons"

These types of statements show that, despite the acknowledged experience of most of the participants, the importance of musical education for this type of students makes more in-depth training in inclusive education necessary.

In response to the question "what type of knowledge, skills and attitudes would you need to learn?", the participants mainly mentioned basic tools in inclusive education, classroom dynamics, resources for attention to diversity, communicative skills or methodological implications, and also requested more training during their university studies and in continuous training courses given the presence of these students in class. The sample as a whole agrees that the music classroom is a favourable site for fostering inclusive education, as shown in Figure 2, in view of certain factors (content, inclusive resources, methodology, joint assessment), but an overwhelming percentage of the respondents (96.8%) state that they need more specific training in education for students with special educational needs.

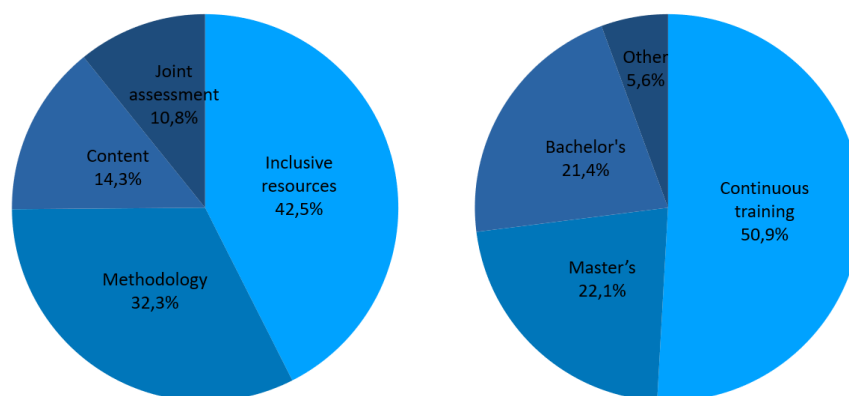


Figure 2. Special educational needs learning factors in the music classroom and need for training

Own elaboration

Indeed, Pearson's coefficient confirms the close relationship between the variables of training and confidence in inclusive teaching ($p = .030$; $r = .647$), while classroom experience alone is clearly disconnected from the confidence parameter ($p = .429$; $r = .063$).

3. Discussion and conclusions

The most notable aspect of this research is the unanimity that the sample displays regarding the need for training in special educational needs, both among respondents who state that they have received this training, who complain that they do not have sufficient tools and resources and who feel they lack competence in it, and among respondents who report not having received any training in this regard. In any case, the respondents' statements about their experience in the classroom confirm the presence of students with special educational needs, with 73.4% of the sample reporting this. This is a large proportion of students who require adaptations as they have diverse characteristics, nonetheless, a lack of training in this regard is shown as only 43.6% of respondents report having received relevant training.

The presence of students with special educational needs and the need for training and means of staying up to date to improve attention for them in the classroom is confirmed, something also reflected in earlier research, such as that by Llorent-García and López-Azuaga, 2012; Lacruz-Pérez *et al.*, 2021; Sabbatella and Del Barrio Aranda, 2021; Del Barrio *et al.*, 2019; and Díaz-Santamaría and Moliner, 2020. The shortcomings in training in this area cause feelings of frustration and demotivation in teachers that could result in a certain rejection of students with special educational needs, as indicated by some of the responses received in the final part of the questionnaire: I am concerned that I do not have the knowledge, resources and skills required to cater to students, I have

brief relationships with them or I feel limited when interacting with them. For this reason, some studies propose resolving these perceptions by proposing co-teaching (Pérez-Gutiérrez *et al.*, 2021).

We also found a connection between the responses of some participants and some earlier pieces of research. The participants' opinions reflect a certain concern with having to provide greater dedication to students with special educational needs and for their acceptance in the group. Previous publications have noted a preference for placing students with special educational needs in specialist centres, something that would resolve both concerns of the participants (Cota-Román *et al.*, 2022).

In light of the results obtained, we believe that it would be of value to dedicate more efforts to attention for students with special educational needs, increasing its presence in the subjects that comprise the educational plans for teacher training. Half of the people surveyed call for continuous training and inclusive resources. Villegas (2019), in his research, notes an increase in students who require specialist attention, and it appears that the proportion of students who do not require this type of attention is progressively shrinking. Although the rights of students with specific educational support needs are recognised by law, we have found some shortcomings in both the educational plans and continuous training. This agrees with the data obtained in this study about facilitating staying up to date and better attention in the music classroom. There is also a risk that efforts will be focussed solely on students with special educational needs and that the attention that students who do not have these special demands require will be forgotten (Ribeiro, 2015).

We assessed how much the objectives set in this work were achieved. The first objective was to analyse teachers' level of experience of and training for students with special educational needs in music classrooms on the island of Tenerife (Canary Islands–Spain), and we were able to go into the greatest depth with this objective. The teachers confirm that there are students who have special educational needs in their classes and report that they do not have previous training in inclusion.

In relation to the second objective, to quantify the skills that students with special educational needs learn in the music classroom according to teachers' experience and training, an improvement in self-knowledge and socio-communicative skills was apparent when compared with the results obtained regarding training and improvement in languages and self-knowledge in relation to their experience.

In the third objective, to analyse the training offer for teaching students who have special educational needs in order to continue with the advance of inclusive education, the demand for specific training in teaching students with special educational needs with 96.8% of respondents mentioning this, indicates a shortcoming in training in inclusive education.

Consequently, there is a need to improve how specialist music teachers perceive their pedagogical intervention with students who require this attention. As this work shows, teacher training has a holistic aspect in which the different levels of training converge. It would be possible to achieve a pedagogical improvement guaranteeing attention to students' diversity, facilitating their insertion and participation and the achievement of their goals, if the teaching focus values and respects the individual from the beginning (Delgado-Valdivieso, 2021). Training in the discipline to be taught does not guarantee that teachers will provide a good individualised attention despite their engagement, as, in view of the data collected from the sample, the training they received in how to cater for students with special educational needs is scarce and does not give specialist teachers confidence.

4. References

- Alba, C. (2012). Aportaciones del Diseño Universal para el Aprendizaje y de los materiales digitales en el logro de una enseñanza accesible. En J. Navarro, M. T. Fernández, F. J. Sotoy, F. Tortosa (Coords.). *Respuestas flexibles en contextos educativos diversos* (1-13). Consejería de Educación, Formación y Empleo.
- Bauman, Z. (2015). *Modernidad líquida*. Fondo de Cultura Económica
- Berciano, A., Alsina, A. y Novo, M.L. (2019). Conexiones matemáticas de tipo conceptual en niños de 4 años. *REDIMAT. Journal of Research in Mathematics Education*, 8(2), 166-192. <http://dx.doi.org/10.4471/redimat.2019.3938>
- Cabero-Almenara, J. y Ruiz-Palmero, J. (2018). Las Tecnologías de la Información y Comunicación para la inclusión: reformulando la brecha digital. *IJERI: International Journal of Educational Research and Innovation*, 9, 16-30. <https://www.upo.es/revistas/index.php/IJERI/article/view/2665>
- Calderón-Garrido, D., Cisneros, P., Diego-García, I., Fernández, D. y de las Heras-Fernández, R. (2019). La tecnología digital en la Educación Musical: una revisión de la literatura científica. *Revista Electrónica Complutense de Investigación en Educación Musical*, 16, 43-55. <https://doi.org/10.5209/reciem.60768>
- Cast (2011). Universal Design for Learning guidelines version 2.0.Wakeeld. <https://shre.ink/UwwA>
- Chao Fernández, R., Mato-Vázquez, M.D. y López-Chao, A.M^a. (2015). ¿Se trabajan de forma interdisciplinar música y matemáticas en educación infantil? *Educação e pesquisa*, 41, 4. 1009-1022. <https://doi.org/10.1590/S1517-9702201512139014>
- Cota-Román, R.G., Flores-Gamboa, S., Heredia-Ruiz, Ó.M., y Rendón-Toledo, D. E. (2022). Actitudes docentes frente al proceso de enseñanza-aprendizaje en alumnos con necesidades específicas de apoyo educativo a nivel bachillerato. Instituto de Investigación y Capacitación Profesional del Pacífico - IDICAP PACÍFICO. <https://doi.org/10.53595/eip.006.2022.ch.2>
- Cruz-Flores, G. D. L. (2021). Culturas inclusivas en educación media superior: construcción y validación de instrumentos. *Sinéctica*, 56, 1-24. [https://doi.org/10.31391/S2007-7033\(2021\)0056-006](https://doi.org/10.31391/S2007-7033(2021)0056-006)
- Dalmau, M. y Sala, I. (2015). Análisis de la formación universitaria recibida por los titulados universitarios españoles con discapacidad auditiva en la adquisición de las competencias profesionales. *Siglo Cero*, 46(3), 27-46. <http://dx.doi.org/10.14201/scero20154632746>

- Del Barrio, L., Sabbatella, P. y Brotons, M. (2019). Musicoterapia en Educación: un proyecto de innovación orientado a la inclusión del alumnado con necesidades educativas especiales. *Revista Música Hodie*, 19, 1-13. <https://dx.doi.org/10.5216/mh.v19.51723>
- Delgado-Valdivieso, K. (2021). Diseño universal para el aprendizaje, una práctica para la educación inclusiva. Un estudio de caso. *Revista Internacional de Apoyo a la Inclusión, Logopedia, Sociedad y Multiculturalidad*, 7(2), 14-25. <https://dx.doi.org/10.17561/riai.v7.n2.6280>
- Díaz-Santamaría, S. y Moliner, O. (2020). Redefiniendo la Educación Musical Inclusiva: Una revisión teórica. *Revista Electrónica Complutense de Investigación en Educación Musical*, 17, 21-31. <http://dx.doi.org/10.5209/reciem.69092>
- Dumont, J. R. (2018). Discapacidad en el Perú: Un análisis de la realidad a partir de datos estadísticos. *Revista Venezolana de Gerencia*, 24(85), 1-15. <https://produccioncientificaluz.org/index.php/rvg/article/view/23838/24269>
- Elmgren, H. (2019). Merit-based exclusion in Finnish music schools. *International Journal of Music Education*, 37(3), 425-439. <https://doi.org/10.1177/0255761419843990>
- Ford, B. (2021). From a Different Place to a Third Space: Rethinking International Student Pedagogy in the Western Conservatoire. In: Kallio, A.A., Westerlund, H., Karlsen, S., Marsh, K., Sæther, E. (eds) *The Politics of Diversity in Music Education. Landscapes: the Arts, Aesthetics, and Education*, 29. https://doi.org/10.1007/978-3-030-65617-1_13
- Francisco, M.B.P., Hartman, M. & Wang, Y. (2020). Inclusion and Special Education. *Education Sciences*, 10(9) <https://doi.org/10.3390/educsci10090238>
- Frid, E. (2019). Accessible Digital Musical Instruments—A Review of Musical Interfaces in Inclusive Music Practice. *Multimodal Technologies Interaction*, 3, 57. <https://doi.org/10.3390/mti3030057>
- Gammeren, D. & Szram, A. (2019). Threshold Concepts in Online Music Education: Transforming Conservatoire Training. *Proceedings of the European Conference on e-Learning*, [s. l.], p. 588-592. <https://shre.ink/rssK>
- García-Navarro, X., Guirado-Rivero, V. C. del., Largo-Arena, E. A., & Bermúdez-López, I. L. (2022). Educación inclusiva: derecho de todos a una educación de calidad. *Revista Conrado*, 18(87), 298-305. <https://conrado.ucf.edu/cu/index.php/conrado/article/view/2530>
- Gisbert, V. y Tizón, M. (2022). Música, inclusión y gestión emocional en el aula de Educación Infantil. En S. Olivero (Ed.) *Artes y Humanidades en el centro de los conocimientos. Miradas sobre el patrimonio, la cultura, la historia, la antropología y la demografía*. (pp. 901-917). Dykinson.
- Gu, S. S. & Hwang, S. (2019). Music Teachers' Perceptions of the Music Therapy Curriculum in Special Education Schools. *Journal of Music and Human Behavior*, 16 (1), 89-117. <https://doi.org/10.21187/jmh.2019.16.1.089>
- Gustau-Olcina, S. y Ferreira, M. (2020). La didáctica de la expresión musical y la inclusión. Un estudio mixto realizado con estudiantes de grado de maestro sobre la importancia de la música en la educación primaria. *Artseduca*, 25, 23-40. <http://dx.doi.org/10.6035/Artseduca.2020.25.3>
- Lacruz-Pérez, Sanz-Cervera, P., Pastor-Cerezuela, G., y Tárraga-Mínguez, R. (2021). Análisis de conocimientos sobre aulas de comunicación y lenguaje de futuros/as maestros/as. *Revista Fuentes*, 23(1), 53. <https://doi.org/10.12795/revistafuentes.2021.v23.i1.12291>
- Lafuente, Á. y Jurado, P. (2018). Instrumentos para la valoración de necesidades en el aula de música con alumnado con sordera. *Siglo Cero Revista Española Sobre Discapacidad Intelectual*, 49(3), 27-38. <https://doi.org/10.14201/scero20184932738>
- Llorent-García, V. J. y López-Azuaga, R. (2012). Demandas de la Formación del Profesorado. El desarrollo de la educación inclusiva en la Educación Secundaria Obligatoria. *REIFOP. Revista Electrónica Interuniversitaria de Formación Del Profesorado*, 15(3), 27-34. <http://www.redalyc.org/articulo.oa?id=217026228009>
- López-Casanova, M^a B., y Nadal, I. (2018). La estimulación auditiva a través de la música en el desarrollo del lenguaje en educación infantil. *Revista Electrónica de Investigación y Docencia*, 20, 107-124. <https://zaguan.unizar.es/record/71219>
- Martínez Requejo, S., Escorial, S. y Lores-Gómez, B. (2022). El «Román de Flamenca» y el lenguaje musical de Rosalía. Una propuesta didáctica conforme al Diseño Universal de Aprendizaje (DUA). *Cauce (Sevilla)*, 45, 93-116. <http://dx.doi.org/10.12795/CAUCE.2021.i44.05>
- Mills, M. & Rielle, K. (2018). *Teaching in alternative and flexible educational settings*. Routledge.
- Ministerio de Educación y Formación Profesional, (s.f.). Educagob. Portal del Sistema Educativo Español. Alumnado con necesidad específica de apoyo educativo - | Ministerio de Educación y Formación Profesional (educacionyfp.gob.es)
- Monteagudo, J., Gómez, C.J. y Miralles, P. (2017). Evaluación del diseño e implementación de la metodología flipped-classroom en la formación del profesorado de ciencias sociales. *RED. Revista de Educación a Distancia*, 55(1) <http://dx.doi.org/10.6018/red/55/1>
- Muntaner-Guasp, J.J., Mut-Amengual, B. & Pinya-Medina, C. (2022). Active Methodology for the Implementation of Inclusive Education. *Revista Electrónica Educare (Educare Electronic Journal)*, 26(2), 1-21. <https://doi.org/10.15359/ree.26-2.5>
- Ojeda, A.I., Casado-Muñoz, R. y Lezcano, F. (2019). Los centros de recursos para la inclusión educativa en España: un perfil de su desarrollo normativo. *Profesorado. Revista de currículum y formación del profesorado*, 23(1), 37-59. <https://doi.org/10.30827/profesorado.v23i1.9143>
- Orozco, G., Tejedor, F. J. y Calvo, M. I. (2017). Meta-análisis sobre el efecto del software educativo en alumnos con necesidades educativas especiales. *Revista de Investigación Educativa*, 35(1), 35-52. <https://doi.org/10.6018/rie.35.1.240351>

- Pareja de Vicente, D., Leiva-Olivencia, J. J., y Matas-Terrón, A. (2020). Percepciones sobre diversidad cultural y comunicación intercultural de futuros maestros. *Revista Electrónica Interuniversitaria de Formación del Profesorado*, 23(1). <https://doi.org/10.6018/reifop.403331>
- Parody L. M., Leiva, J. J. y Santos-Villalba, M. J. (2022). El diseño universal para el aprendizaje en la formación digital del profesorado desde una mirada pedagógica inclusiva. *Revista Latinoamericana de Educación Inclusiva*, 16(2), 109-123. <https://doi.org/10.4067/S0718-73782022000200109>
- Pereira, A. A., Plata, M. D., Ortiz, M. L., y Jiménez, A. I. (2019). Educación transdisciplinar en valores para la integración de jóvenes en riesgo de exclusión social. *Roteiro*, 44(2), 1-24. <https://doi.org/10.18593/r.v44i2.17542>
- Pérez-Aldeguer, S. (2013). Efectos del Teatro Musical Colaborativo sobre el Desarrollo de la Competencia Social. *Revista Electrónica de Investigación en Psicología de la Educación*, 11 (1), 117-139. <http://investigacion-psicopedagogica.org/revista/new/index.php?n=29>
- Pérez Archundia, E., y Millán, H. (2019). Inclusión y justicia social en México. ¿Qué hacer desde la educación? *Revista Educación*, 43(2). <https://doi.org/10.15517/REVEDU.V43I2.34047>
- Pérez-Gutiérrez, R., Casado-Muñoz, R. y Rodríguez-Conde, M.J. (2021). Evolución del profesorado de apoyo hacia la educación inclusiva: una perspectiva legislativa autonómica en España. *Revista Complutense de Educación*, 32 (2), 285-295. <https://doi.org/10.5209/rced.68357>
- Quesada, M.I. (2021). Metodologías inclusivas y emergentes para la formación docente en inclusión educativa. *Revista Internacional de Apoyo a la Inclusión, Logopedia, Sociedad y Multiculturalidad*, 7, 2. <https://dx.doi.org/10.17561/riai.v7.n2.6363>
- Qvortrup, A. & Qvortrup, L. (2018). Inclusion: Dimensions of inclusion in education. *International Journal of Inclusive Education*, 22(7), 803-817. <https://doi.org/10.1080/13603116.2017.1412506>
- Ramos, G., Chiva, I. y Gómez, Ma. B. (2017). Las competencias básicas en la nueva generación de estudiantes universitarios: Una experiencia de Innovación. *Revista de Docencia Universitaria*, 15(1), 37-55. <https://doi.org/10.4995/redu.2017.5909>
- Ribeiro, R. (2015). Patologización de la infancia cotidiana. *Teoría y Crítica de la Psicología*, 5, 148-156. <http://www.teocripsi.com/ojs/>
- Rodríguez, C. C., & Garro-Gil, N. (2015). Inclusion and integration on special education. *Procedia-Social and Behavioral Sciences*, 191, 1323-1327. <https://doi.org/10.1016/j.sbspro.2015.04.488>
- Rodríguez-Gudiño, M., Jenaro-Río, C., y Castaño-Calle, R. (2022). La provisión de apoyos fuera del aula como medida de atención a la diversidad y sus efectos en la inclusión educativa. *Siglo Cero*, 53(3), 75-94. <https://doi.org/10.14201/scero2022537594>
- Rodrigo, M.P., Galán, D., Mampaso, J. y Rivera, E. (2022). Diseño universal para el aprendizaje en procesos de investigación participativos e inclusivos. *Prisma Social*, 37 (2), 7-35. <http://hdl.handle.net/10486/707978>
- Sabbatella, P. (2014). Atención a la Diversidad en Educación Musical: Orientaciones Teóricas y Metodológicas para su Aplicación en el Aula. En J.L. Aróstegui (Ed.), *La Música en Educación Primaria. Manual de Formación del Profesorado* (247-278). Dairea.
- Sabbatella, P. y Del Barrio Aranda, L. (2021). La música en la educación del alumnado con necesidades educativas especiales en España: análisis legislativo y propuesta de mejora. *Revista Electrónica Complutense de Investigación en Educación Musical*, 18, 251-263. <http://dx.doi.org/10.5209/reciem.71411>
- Salvador-Ferrer, C. M. (2020). Inclusión social de las personas con discapacidad: estudio piloto en el contexto laboral del papel mediador de la autodeterminación entre el conflicto de rol y la inclusión social. *Siglo Cero Revista Española Sobre Discapacidad Intelectual*, 51(4), 25-37. <https://doi.org/10.14201/scero20205142537>
- Sebastián, H. E., y de Mattos, M. O. (2020). Educación inclusiva: Lo que piensan los profesores sobre la inclusión. *Revista Internacional de Estudios sobre Sistemas Educativos*, 2(10), 417-432. <http://www.riesed.org/index.php/RIESED/article/view/123/140>
- Serrano, R. M.; Nadal, I.; López, M. B. (2022). Aportaciones de las TIC a la práctica coral inclusiva. *Revista Electrónica Complutense de Investigación en Educación Musical*, 19, 141-152 <https://dx.doi.org/10.5209/reciem.74303>
- Terziyska, P. (2020). Musical activities in support of inclusive education. *Pedagogy*, 92(1), 71-83.
- Tobón, I.C. (2020). Diseño Universal de Aprendizaje y currículo. *Sofía*, 16(2), 166-182. <https://doi.org/10.18634/sophiaj.16v.2i.957>
- Toticagüena, M. (2021). Reseña de la obra de Gluschankof, C. y Pérez-Moreno, J. (eds.) (2017). La música en Educación Infantil. Investigación y práctica. Dairea. *Revista Electrónica Complutense de Investigación en Educación Musical – RECIEM*, 18, 265-269. <https://doi.org/10.5209/reciem.75314>
- Valenzuela, R., Codina, N. & Pestana, J.V. (2017). Self-determination theory applied to flow in conservatoire music practice: The roles of perceived autonomy and competence, and autonomous and controlled motivation. *Psychology of Music*, 46(1), 33-48. <https://doi.org/10.1177/0305735617694502>
- Villegas, F. (2019). Necesidades específicas de apoyo educativo: tasas de prevalencia y análisis prospectivo. *Revista de Educación Inclusiva*, 12(2), 66-77. <https://revistaeducacioninclusiva.es/index.php/REI/article/view/514/489>