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Transforming Generalist Teachers' Self-Perceptions Through Art Creativity: An Intervention-Based Study

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Abstract

Some studies have reported that the initial music training of primary teachers can be problematic due to gaps in disciplinary and didactic training and a relative neglect of the objectives that music education should address in the school curriculum. Such gaps may lead to low levels of self-confidence in teaching music in the general classroom. Furthermore, the fast transformations occurring in contemporary society in terms of access to and functions of music, demand novel pedagogical approaches

that might be better equipped to address current social and educational needs such as creativity, collaborative work and interdisciplinarity. In order to investigate the relationship between the initial musical training of primary teachers and their self-confidence in teaching music, a study was carried out based on an intervention in the Primary Education Teaching degree program at a Spanish university. The intervention was innovative and based on a collaborative, creative, and interdisciplinary approach. The findings, referring both to the processes and products of this intervention, show both an increase in pedagogical reflection and in the transformation of values and beliefs, as well as an improvement of self-confidence in student teachers' musical skills.

Introduction

Several studies focusing on primary teachers' music education during their initial teacher training highlight their low levels of self-confidence in teaching music (Abril & Gault, 2005; Battersby & Cave, 2014; Seddon & Biasutti, 2008). The teaching of music by primary teachers may be problematic in some cases, especially due to teachers' lack of self-confidence in the specific training and skills necessary for teaching music (de Vries, 2015). In Spain, this low self-confidence may occur because music education in initial teacher training is usually linked to a conservatory model that prepares professional instrumental performers, based mostly on Western tonal music; this model is often far removed from the experiences, preferences and musical lives of primary level student teachers (Aróstegui, 2016). This model is widely used by university teachers who train primary school teachers and is transmitted in the professional performance of those new teachers (Regelsky, 2017). The result of its replication in classroom contexts is an educative and musical practice that is entirely dissociated from the objectives that should be met during primary school. This situation requires a short excursus.

We believe that music training for generalist teachers should not be carried out exclusively within the Western tonal music model, since due to its complexity, it requires an amount of training time that university programs do not provide (Regelsky, 2017). If it were attempted to be applied in a semester subject, the result would probably be a precarious training in theory and representation of tonal language. Problems in the construction of musical knowledge and skills in initial training would likely negatively affect trainee teachers' self-perceptions of using music in elementary school and, most likely, their beliefs about professional identity as well (Tejada et al., 2020).

At the level of professional performance, the function of art in school should be different. In the case of music, we believe that the representation and theorization of Western music in

elementary school should be limited, as the function of music at that stage should be primarily educational, e.g., to foster a taste for art, to use art to form and express individual identities (MacDonald et al., 2017), and to foster decision-making, something that creative processes help to develop (Cheung & Leung, 2013).

This model, based on reproductive activities using Western tonal language, raises tensions regarding Western societies' contemporary needs that embrace new ways of understanding and relating to music (Jorgensen, 2002; O'Neill, 2014), feeding false beliefs that could negatively affect teachers' self-perception during their training period, such as the idea that human musicality is innate and highly specialized (Welch & Henley, 2014), for example. Throughout the teaching process, this model fosters an artificial division between cognition and the body, which is especially apparent in processes related to musical literacy, particularly when compared with what could be a more integrative approach based on multidisciplinary, creative and bodily based educational strategies (Leman, 2017; Randles, & Webster, 2013). Accordingly, Regelski (2017) affirms that the multiple attitudes, values, dispositions, practices and paradigms that music teachers tend to accept uncritically in the course of their professional musical training are often inadequate for the existing expectations, needs and conditions of the general schooling period.

An intervention that would take into account the social and personal needs of students through a non-Eurocentric approach, while attending to a concept of music with an open, collaborative, interdisciplinary vision and adopting a holistic and situated vision through creative activities, could perhaps positively change the self-perception of the skills in music education of education professionals. Subsequently, their willingness to include music as part of classroom curricular contents may be positively affected, even if they are not specialists (Biasutti et al., 2015). This is the justification for carrying out the intervention-based design presented in this paper, which has allowed us to reflect on the music education of generalist teachers and, above all, to think about the potential of the intervention to influence their attitudes towards music education.

Literature Review

Music Education in Generalist Teacher Training

Within the current political and socioeconomic context, it is necessary to educate professionals who are capable of planning and promoting musical activities that foster critical thinking, creativity, and collaborative approaches to classroom work (Biasutti, et al., 2015; Hennessy, 2010). The function of the university is to provide opportunities for these professionals to develop skills and practical knowledge through honest and valuable work,

leading them to perceive music education from a multisensory, liberating, critical and creative point of view (Lowe, et al., 2017; Selkrig & Keamy, 2017).

Musical training of primary teachers in Spain has been criticized in different studies (Aróstegui, 2016). These studies point out, firstly, an excessive orientation towards conceptual knowledge and teaching models anchored in the tradition of music conservatoires and primary teacher training schools of the 19th century; and secondly, to the limited duration of music education in the Spanish curricula of primary level student teachers (Blanco & Peñalba, 2020). Thus, at the University of Valencia, there is one semester course of 60 hours that, at least in theory, should give proper professional training to primary student teachers with regards to their music education and music education didactics, but that has revealed itself to be utterly insufficient. This problem extends to the whole country, leading primary teachers to the systematic application of a set of simple "recipes" that are uncritically reproduced (Tejada et al., 2020) and that have nothing to do with approaches that value a systematic, holistic and intentional program that might encourage positive attitudes towards music education among primary level student teachers (Cremin, et al., 2006).

Some studies (Economidou, 2013; de Vries, 2013; Mota, 2015) have demonstrated great concern about low levels of self-esteem among teachers regarding musical work or music training. The absence of a musical and didactic training that prepares primary teachers to address the main goals of school music education can inhibit the development of those skills that could make them feel confident in their ability to address music education in the classroom (de Vries, 2013; Tejada et al., 2020). For example, it has been pointed out that the lack of positive musical experiences during the school years frequently prompts musical insecurities during adulthood (Pitts, 2009). Furthermore, primary teachers judge and compare their informally acquired musical knowledge with that of their fellow music specialists, which further reinforces their self-perception of inadequacy (Seddon & Biasutti, 2008; Tejada et al., 2020).

Primary teachers have been shown to regard their musical ability as a fixed entity coming from genetic inheritance which they either possess or don't (Biasutti, 2010). This belief is groundless, since adults are as capable as children of developing their musicality when they have the opportunity to participate in creative musical activities (Henley, 2017). Adopting more collaborative and inclusive approaches where students' musicality is considered could change this belief (Henley, 2017; Draves, 2018). In this sense, some studies point to the need to acknowledge students' identities and the way in which their self-perceptions and beliefs are constructed, to transform them into new possibilities that might give them the necessary self-confidence to teach music education according to the changing needs of todays' society (Ballantyne, et al., 2012; Draves, 2018).

Creative Learning Within Generalist Teachers' Education

Creativity touches all fields and disciplines (Runco & Albert, 2010), but creative processes are an integral and recognized component of the arts. The way in which teachers promote and make use of creativity has been a constantly growing topic of study, and one of the most important areas of research at the beginning of the new millennium (Randles & Muhonen, 2015; Randles & Webster, 2013). However, some studies indicate a lack of specific programs or approaches that might foster the development of creativity during initial teacher training (Wiles & Kokotsaki, 2019).

Several studies on creativity and initial teacher training such as those by Cheung & Leung (2013) or Economidou (2013) highlight the importance of advancing such training programs through more creative approaches. Other studies have examined student teachers' conceptualizations about creativity (Crow, 2008; Kokotsaki, 2012). Nonetheless, little is still known about how teachers learn and develop creativity in the classroom (Selkrig & Kemay, 2017). Thus, Kokotsaki (2012) stresses that primary school teachers with limited conceptions of creativity believe that creativity depends on the child's inherited ability and not on the competence and experience of the teacher. They focus on creativity's outcomes — the product — rather than the process: that is, the cognitive and social aspects. In addition, some view creativity simply as "entertainment" or as a set of unstructured activities in which the child's participation was the underlying motivation.

It has been suggested that creativity is not an important concept in student teachers' imaginaries (Crow, 2008). In fact, some believe that creativity facilitates understanding and the development of musical skills and others consider that it fosters more generic social skills. Accordingly, it has been argued that a creative approach to music education, focused on the creative processes and not on its products, implies, on one side, a more reflective look and, on the other, the exploration and experimentation into ideas that could facilitate the understanding of musical concepts and knowledge (Murillo et al., 2019). Teachers who address education through creative processes find ways to enhance their students' musical experiences, even when they teach in rigid socio-professional contexts in which educational norms determine many of the pedagogical actions (Zhukov, 2019).

What has been mentioned so far suggests that teachers should be able to plan and implement teaching strategies within music education that are more focused on the dynamic, collaborative and creative aspects of musical practice, addressing later declarative content. In this sense, it is necessary for teachers to learn to offer their students diverse opportunities for musical exploration and experimentation, which can later lead to moments of individual or shared creation (Craft et al., 2012). For primary teachers to be able to adopt creative approaches, they need to participate in creative learning experiences during their initial

teacher education (Grainger et al., 2004). Thus, it is suggested that they take risks and work outside what is safe, known, and predictable (Burnard & White, 2008), which also promotes the understanding and adoption of new methodologies in the classroom.

Interdisciplinarity and Generalist Teacher Education

The transformation of educational processes has often been accompanied by advocacy for a greater use of interdisciplinary and holistic approaches to learning, as they are seen as beneficial in conceptual, curricular, and pedagogical terms (Thorburn, 2017). Likewise, Spanish study-plans reflect this interest in adapting learning processes to interdisciplinary approaches and favoring connections between the different knowledge areas. In contexts where there is a true commitment towards interdisciplinary approaches, an ethical position is adopted in favor of rationality and democracy, and spaces for dialogue are created, based on an educational approach that questions 'ready-made' assumptions and certainties. In this sense, schools should radically shift towards a more interdisciplinary approach, moving away from isolated individualistic and disciplinary learning (Harris & Bruin, 2019; Corbisieros-Drakos, et al, 2021).

A recent study focused on creative and interdisciplinary approaches to initial teacher education showed the extraordinary power that these approaches might have in unfolding the potential of the arts to connect different themes and ideas from different knowledge areas (Daly et al., 2016). This type of approach provides both breadth and depth to the experiences of students, thus facilitating the awakening of truly meaningful learning (Rosa-Napal et al., 2021) that is often later remembered by students during their adult lives (May, 2012; May & Robinson, 2016). However, despite the positive results attained by interdisciplinary artistic approaches, many teachers find it difficult to associate different knowledge areas, facing difficulties and unexpected challenges both in their classroom practice and when working with their colleagues. Such difficulties might be reduced to minor or non-existent if they were previously addressed in their initial education (Bruce, et al., 2004). These challenges include establishing collaborative processes among teachers, the additional time it takes to plan and prepare integrated lessons, and the small amount of time left to cover the main goals of the music curriculum (May, 2012). To reduce difficulties and achieve success in integrating the arts, teachers with experience in various subject areas should learn to work together, planning and implementing integrated lessons as a team (Daly et al., 2016).

Besides, when integrating diverse subject matters, it would be desirable to insist less on the differences between subject contents and more on the relationships that already exist between them that could ensure a more comprehensive learning process (Bohannon and McDowell, 2010). In this way, the integration of the arts might become a truly powerful tool for learning, motivating students, and reinforcing the construction of reflective and collaborative skills,

while at the same time, fostering a conceptual understanding of music. It is on this basis that Novy (2012) affirms that interdisciplinary knowledge is sensitive to context and captures complexity, integrating multiple perspectives and opposing interests.

Method

Research Design

The present research is framed within a sociocritical paradigm and adopts an intervention-based design. The intervention was carried out during one semester of a music education course for primary school teachers at the University of Valencia. The intervention was based on an active, creative, collaborative, interdisciplinary and critical musical practice that was intended to encourage reflection on the students' own musical abilities and thus, try to improve their self-perception of their didactic abilities in relation to music. Quantitative and qualitative data were collected; the former were used to categorize the participants and the latter to construct an interpretation of the studied phenomenon.

Participants

Participants in this research project consisted of two groups of students enrolled in the subject matter *Musical Expression and its Didactics in Primary Education* of the degree in Primary Teacher Education of the University of Valencia (n = 72, 50 female and 22 male); ages ranged from between 18 to 41 years old (M = 20.1). The selection of the participants was made by convenience. The majority of the students had been accepted to the university via the *University Access Test* (83.3%). Regarding the ethical protocol, all participants were asked for their written consent to participate. Prior to consenting, participants were carefully informed of the terms of the research project, and the relationships between the research and the contents of the discipline, the methodology, and the evaluation process. Data characterizing this group of participants — previous artistic experiences, realization of creative artistic activities, musical genres they listened during compulsory education and outside regular classes — were obtained through a questionnaire (section 3.5).

Participant Characteristics

Some 31 of the 72 participants (43%) declared they had had formal training in at least one artistic subject area in their compulsory education (15 people in music, 10 in dance, 4 in drama and 2 in visual arts). Within this group, 12 undertook formal music studies at conservatories, while the rest did not. The group also showed a great diversity of musical experiences in Primary and Secondary Education (Figure 1).

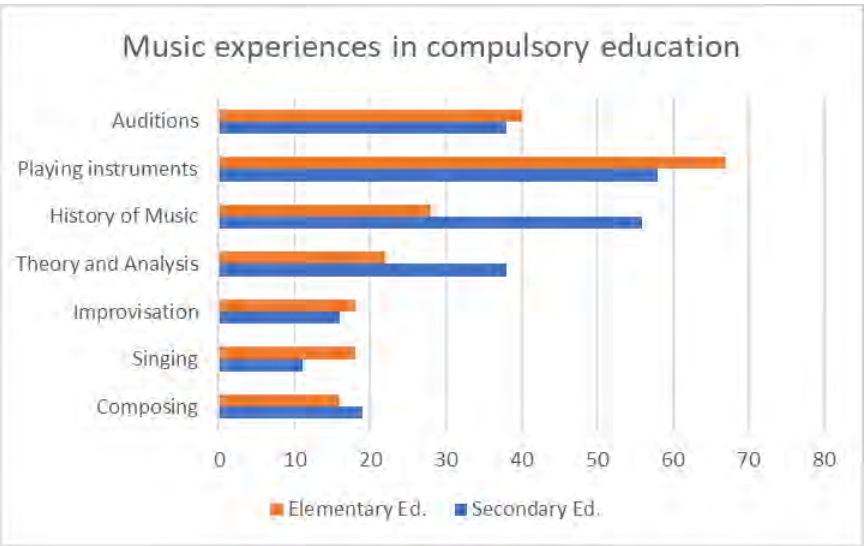

Figure 1. Musical activities carried out by participant students during their compulsory education.

A total of 52.8% of participants also claimed to have carried out individual creative activities within artistic subject areas during compulsory education, while 43.1% stated that they had developed such activities collaboratively. Group work was related to the creation of choreographies, music composition, field-recordings, songwriting, drama activities, creation of original texts and the production of audio-visual outputs. Another 34.7% had developed creative approaches in non-artistic subject areas, such as composing lyrics for songs, writing texts, recording films, participating in theatre performances or producing short films about subjects such as ecology and bullying.

During extra-curricular activities, the number of creative experiences is higher (48.6%). These activities are mainly related to organization and participation in festivals, the construction of musical instruments, and participation in activities like gymnastics, painting, or decor. Still, the absence of creative activities is very meaningful. From these students, 77.8% stated that their teachers emphasised the importance of developing their creative skills. The rest (22.2%) affirmed the opposite, indicating as possible causes for this absence the uniformity of the educational system. Some 86% declared that they have not carried out cross-curricular activities. The rest described cross curricular activities in pairs of subjects: Physical Education-Music, Literature-Mathematics and Mathematics-Technology. The genres of music they have listened to and practiced in compulsory education was varied, but included Western classical and genres classified as “old music” (88 responses); urban popular music (including rap, electronic, pop and rock; 36 responses); popular traditional (24), and contemporary music (22). One person stated that she “didn’t listen to music in class” (sic).

The Intervention Process

During the semester, students were presented with two projects based on the "Project Based Approach" (PBA) methodology (Tobias et al., 2015). Each project had a didactic suggestion as a starting point. The first suggestion, *Círculo Sonoro* (*The Circle of Sound)* (Figure 2) favoured a flexible approach to students' collaborative work as well as the understanding of the basic elements of music through sonic creation. In this project, students assembled in small groups investigated structures created in the combination of points and lines, which were assigned with different values related to pitch, duration of sound, timbre and structure. Cards containing these points and lines were then distributed on the floor in rows (each group corresponded to one row), promoting the exploration of concepts such as representation, rhythm, improvisation, melody, and harmony, among others.

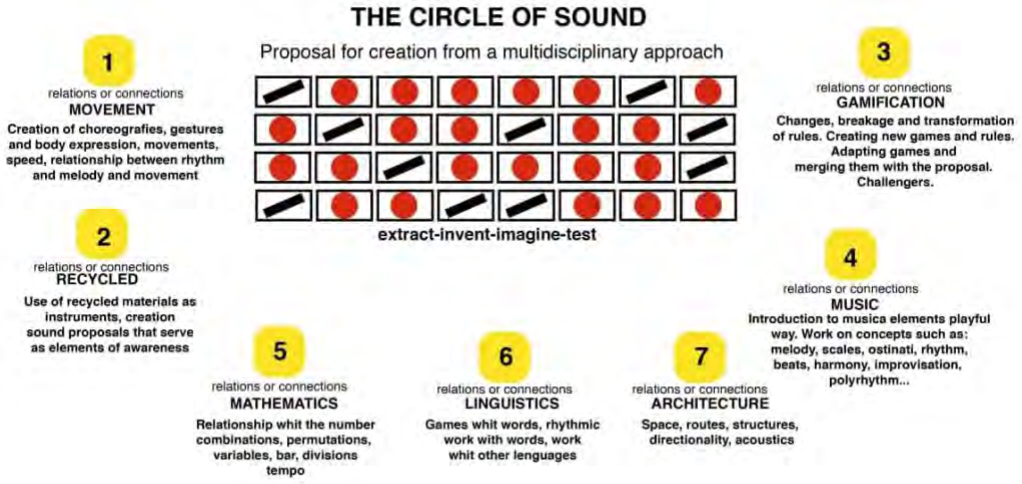

Figure 2. Structure of the intervention from the trigger *"The circle of Sound."*

The second didactic suggestion was *Trazoencorto (Shortstroke)* (Figure 3). Although this project is inspired by the same methodological approach, it is intended to carry out creative processes using contemporary languages through analogical graphic notations. In this project, a single graphic score was chosen, and 6 interpretation possibilities were offered: 1) with the body; 2) with any instrument and movement; 3) with the voice; 4) with electronic means; 5) with objects; and 6) with movements. In both projects, students were encouraged to present their creations from a multidisciplinary approach. The experiences and ideas generated by the groups were used to establish relationships between mathematical concepts, architecture, linguistics, visual arts, and themes such as ecology and climate change.

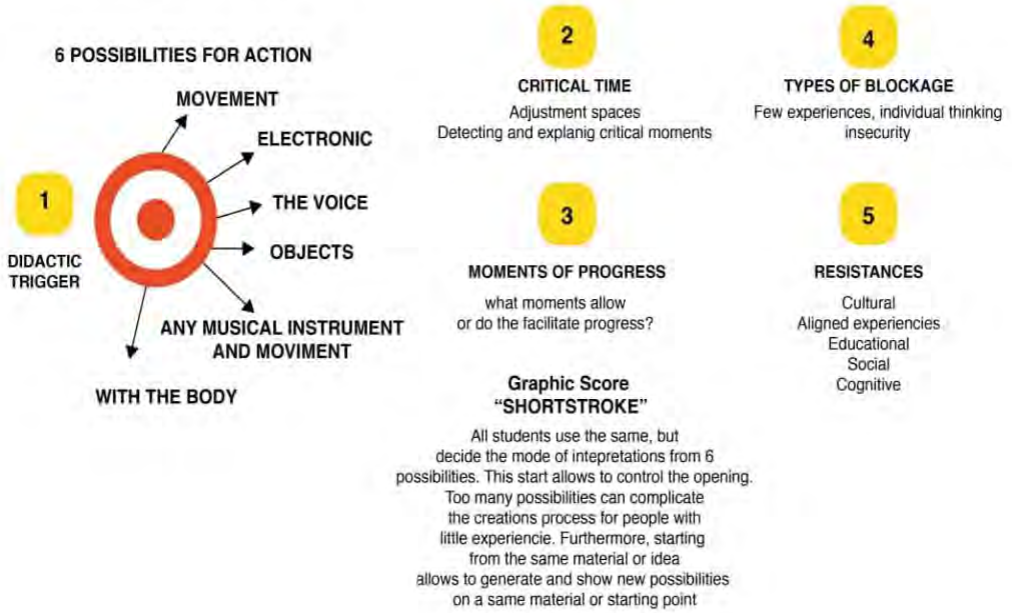

Figure 3. Structure of the intervention from the stimulus (trigger) *Shortstroke.*

Questionnaire

A questionnaire was constructed with 47 open and closed items. The first section collected sociodemographic and academic profile data (6 items); Section 2 included 16 items that allowed the researchers to characterize the students' previous artistic experiences in compulsory education. Section 3 included 9 items on the creative approach followed in the subject. Finally, section 4 included 16 items on the students' perceptions of both their creative development and the applicability of creative processes at school. The students' final perceptions were collected through open-ended items of dimensions 3 and 4 of the questionnaire. Participants completed this questionnaire at the end of the intervention.

Sections 3 and 4 of the questionnaire were reviewed by two university researchers who were not part of the main research team, but who had extensive experience in the field of teacher education. They were asked to assess the adequacy to the objectives of the study of each of the items in these two dimensions. Whenever they gave a negative response, they were asked to detail the negative aspects of the item in question. The researchers modified the questionnaire to incorporate the evaluators' observations. Afterwards, the evaluators reviewed the sections again and agreed completely on the adequacy to the objectives.

A self-report collected the students' evaluation of the process (Figure 4). For its elaboration, a series of broad themes were provided to guide the responses towards the categories of information needed in the study. Some of these dimensions were a priori categories for the content analysis of both the final questionnaire and the self-report.

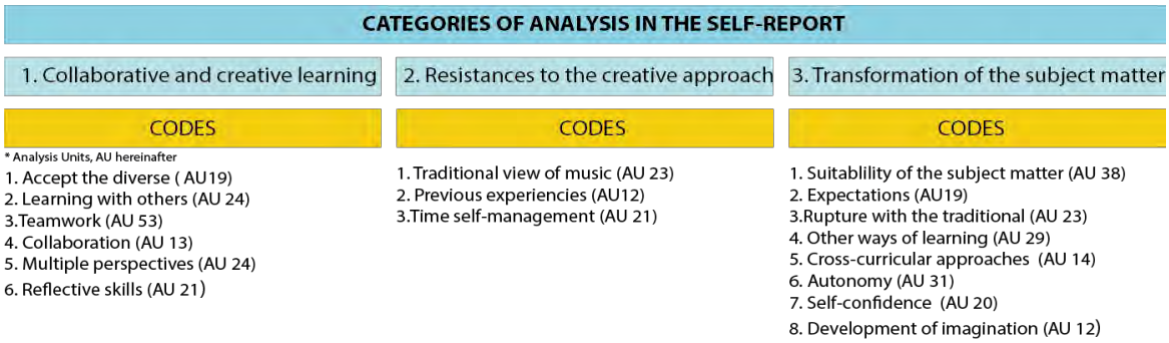

Figure 4. Analytical categories used in the self-report.

A class diary allowed the researchers to take notes during the intervention process. The information collected was at times used to contrast the data extracted from the self-report and from sections 2 to 4 of the final questionnaire.

The product evaluation was carried out using a numerical scale rubric that assessed six parameters of the projects completed by the students. In section 3.1, the results of this evaluation are presented in order to complete the data for the reader but left aside in the interpretation of the data related to the objectives.

With respect to aspects of validity and consistency in qualitative research such as credibility (Guba, 1989) and auditability (Miles & Huberman, 1994), this study constitutes a unique phenomenon in a particular context: the perceptions of generalist teachers taking a music education course through creative and collaborative activities with a non-tonal language in a context of interdisciplinarity. The findings regarding this intervention-based design are not intended to be generalized to other contexts and individuals. An account of what happened in the research has been made by adopting Lincoln's (1995) criteria of authenticity and some criteria synthesized by Hammersley (1992), who states that any criterion of validity in qualitative research must always be "heuristic, based on tacit and questionable assumptions and its application must therefore be subject to possible discussion" (p. 60). Of these criteria

for authenticity, five have been adopted: 1) the degree to which formal theory is developed; 2) the novelty of the claims; 3) the credibility of the report for readers and research subjects; 4) the consistency between claims and empirical observations; and 5) the inclusion of representative examples of these in the narrative (p. 64).

Findings emerged from the triangulation of the data obtained in the questionnaire, in the self-report, and in the evaluation of the final product, through the integration of these three components within the same narrative.

Categories

The categories of analysis included in the questionnaire were: 1) perceptions about the focus of the subject; 2) self-perception of didactic skills within creative activities and their application in school contexts. The categories of analysis in the self-report were: 1) learning; 2) resistance to the creative approach; and 3) suggestions for changes in the subject Furthermore, these categories were related to the data of the academic profile of the students.

Findings

To maintain the anonymity of the students, two numbers between parenthesis are indicated at the end of each comment. These numbers refer to the document number and the line number of the text where the students' responses were coded through the qualitative analysis software Atlas-Ti.

Evaluation of the Final Product

The evaluation of the final product was carried out through a rubric that included the following criteria: a) presentation (originality and clarity of the final performance); b) group work management; c) traceability to the original trigger of the project; d) connections (new ideas to expand the initial proposals); e) musical elements (development of the musical performance); and f) writing of the self -reports. A ten-point scale was used to access each one of the criteria. The average scores of the product's evaluations show good learning levels within the subject matter (Figure 5). There is a small disparity in the evaluation of the project between the two groups. The reason for this disparity may lie in the different class schedules of group 1 and 2: Group one had classes in the morning and group two had classes in the evening. This last group consisted mainly of working students that, for this reason had less time to develop the activities assigned in the classes.

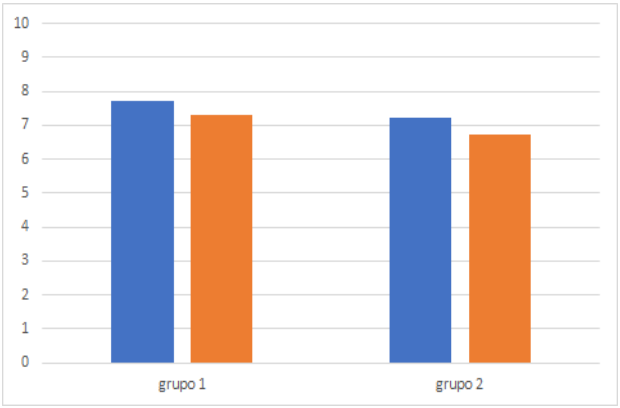

Figure 5. Mean scores of the two projects carried out by the two groups of participants in the intervention. (blue: project 1; orange: project 2).

Creative and Collaborative Approach to Learning

The category collaborative and creative learning included 6 codes: accept the diverse (19 Analysis Units, AU hereafter),[1] learning with others (24 SU), teamwork (AU 53), (AU 8), collaboration (AU 13), multiple perspectives (AU 24), reflective skills (AU 21).

Students positively valued the richness of the different perspectives converging within group work. Several points of view converge within each group: favouring collaboration, tolerance and respect for different ideas, such as shown in this quote: "The different ways of thinking and doing of each classmate contributed not only to the construction of my own knowledge with regards to the other subject-matters of the curriculum, but also to issues like living together, my life, and my present and future professional life [1-258]". Likewise, several comments emphasize the importance of peer learning and the coordination of the different points of view that arise in the symbolic interaction between different individuals of the same group. For example: "I have always thought that cooperative work has many positive aspects; it is a way to facilitate your own work and the work of others [1-323] ".

In relation to teamwork, there were statements confirming the feeling of teamwork with equal importance and responsibility among members, such as:

> "I realized, working with both groups, that we were doing it as a team, but really, I mean that we did not join parts and then say that each one had done his own thing

[1] The number of analysis units of each code is shown in order to give the reader an idea of the importance of the participants' statements on a given topic, not in order to numerically operate with units, codes, or code families.

> and [that] this is the final work. It happened that the proposal was, so to speak, integrative, it wasn't anywhere done nor did we know which way to go, nor if it was going to be right and that's what made us work in a more collaborative way [1-246]."

This delves into the importance of collaboration (US 13): "Collaborative work is a plus because it allows us to approach the work from different perspectives and help each other, although sometimes it always tends to happen that some work more than others [1-206]".

Still, some responses to the questionnaire clearly point to obstacles and complications that emerged during collaborative work. Some participants showed difficulties in demonstrating their creative abilities when working in groups, stating that, in their opinion, one of the greatest difficulties felt throughout the work was the group itself, justifying their attitudes with comments such as "during group work there is a tendency to waste a lot of time, it is difficult to centre and focus on the main goal", or that it was difficult for them to "use creativity and get the group work done".

It is possible from the data to infer that teamwork was generally accepted by students, highlighting the importance of collaboration among peers. Knowing how to work creatively and in collaboration is perhaps one of the most important skills in social and work life. However, some resistances were manifested with regard to being and doing with others. Initial teacher education might, therefore, become a space to bridge this gap. Thus, we should persist with collaborative approaches to teacher training, highlighting that, although collaborative work implies discussing perspectives that can be contradictory, the moments of discussion and participatory dialogue are unique opportunities for learning to create synergies.

A shared perspective among different group members is developed out of different views that may enrich the overall group's proposal. In this sense, information is gathered on the importance of discarding a "single solution" option and generating a more creative approach that might strengthen multidisciplinary methods. As an example, one respondent states, "I've learned that group work allows us to move in many directions, to consider many possibilities and that, sometimes, what we perceive as known is just the easiest way to get the work done, and not the one that will fulfil us more [1-243] ". Another respondent describes how "we have discovered that everything can be related to music and that we might be creative in the ways we approach it, and that the process doesn't need to be a rigid one [1-70]".

Some comments reflect changes within this group of students with regards to the development of a reflective attitude in their practice:

> "While working, we also investigate, think, and develop a project: registering all the progress, all the ideas that have arisen, those that have not, those that have been accepted, those that have been rejected, and all the processes undertaken until we reach the end; as a kind of memoir or narrative, that might take in the form of drawings, notes, graphs, diagrams, and mental or conceptual maps [1-219] ".

This type of response is aligned with those written in two items of the questionnaire; almost all (98.2%) of the students believed that applying a creative approach in school was important or very important, as well as necessary. The reasons stated oscillated between two poles: 1) a personal one related to individual growth and, 2) a social one, related to community work and life. Among other reasons, it was acknowledged by the students that "it is necessary to learn", that such an approach should be developed because "critical and creative minds are needed" and that "it is necessary for personal growth and the development of new skills". The response of one participant through an open question in the questionnaire illustrates these points:

> "Life is full of obstacles and new challenges that we will have to address in a creative way; progress is all about creating and changing. The main problem of contemporary school is examination. Always the same format. Oh, and many of our creative products should not be evaluated, the feeling that our work is subject to judgement can be really frustrating" [1:330].

The Complexities Involving a Creative Approach

The category resistances to the creative approach included three codes: time self-management (AU 21), traditional view of music (AU 23), and previous experiences (AU 12).

Time management in a creative context is generally conflictive for the participants, as was the case in this intervention. The provision of greater freedom and lack of experience complicated the development of some tasks. As one participant stated, "Planning should have been present throughout; the ideas were ambitious, but we had limited time to execute them [1-269]". Some participants argued that they needed greater restrictions when approaching the diverse project activities, perhaps without reflecting on the loss of autonomy and creative capacity that supposedly restricted their choices during the activities. This point can open a rich debate about the management of classroom activities and how control and freedom can affect student performance.

One of the objections to this approach emerged from the analysis of the self-report data. When some students move away from their musical habits, they fail to understand that they are also learning music, despite doing it through a different and new approach. In some comments this

perception was expressed in a very clear way, such as: “I learned almost nothing about music, but it has not worried me either. And I love music [1-222]”.

In general, it can be affirmed that there is a clear relationship between musical learning and specific musical practices and styles. However, in some comments, students state that they managed to go beyond their past experiences and observe that other ways of learning music are also possible: “I didn’t expect much from this subject matter, just the usual singing or playing the soprano recorder. But I have noticed that I have learned music concepts almost without realizing it and doing group work has helped me a lot [1-62]”. One researcher wrote:

> "It's funny how in the first sessions there is always the same feeling. A mixture of excitement and uncertainty prevents them from flowing. The fear of not finding their answers and not knowing how to approach creative projects almost paralyzes them. The same questions are repeated like a kind of perpetual echo: Professor, how do you want us to do this project? What do you really want? How long should it last?" (Researchers' field diary)

Previous experiences often generated high degrees of uncertainty in students that did not have a strong background in the development of creative activities within music.

Creative Approaches and New Learning Possibilities

The category *transformation of the subject matter* is of vital importance as it helps to respond to the main goal of this study, which was is to investigate the relationship between the initial musical training of primary teachers and their self-confidence in teaching music after this intervention. This category includes the codes: *suitability of the subject matter* (AU 38), *expectations* (AU 19), *rupture with the traditional* (AU 23), *other ways of learning* (AU 29), *cross-curricular approaches* (AU 14), *autonomy* (AU 31), *self-confidence* (US 20), and *development of imagination* (AU 12).

Most of the students favourably evaluated the suitability of the subject matter. For example: “This discipline tried to solve most of the problems related to music education in primary schools, [...] with an emphasis on creativity and imagination” [1-524]. They were positively surprised by the different activities carried out during the intervention, which generated greater acceptance. One participant stated: “I’ve always considered myself an uncreative person [...] I thought that nothing related to the art of music worlds was made for me, but thanks to this discipline I’ve seen and understood that we all have creative skills, and the only thing you need to do is to encourage it [1-337]”.

In terms of self-confidence in their own abilities to implement a creative approach in the classroom (questionnaire), 41.7% of the answers were positive, a finding that resonates with the 98.2% of students who talked about the importance of developing creative approaches at school, and with the 65.3% of students who believe that a creative approach contents allowed them to increase or improve their teaching skills. Actually, most students not only reinforced their ideas about the relevance of creativity in school, but also felt that they had greater abilities to develop creative work in the classroom. This finding suggests that future primary teachers may value the use of creative tools and strategies to develop creativity. The finding also highlights the overcoming of certain fears related with creative processes, like dealing with uncertainty and ambiguity, moving beyond the correct/incorrect, or good/bad binomials, and overcoming the dogmas that often characterize instructional and transmissive teaching methodologies.

The didactic proposals used in this study were used as creative activators or what we call *triggers*. This approach favoured an integrative view, moving beyond music itself. As one participant stated, "This seems to me a very useful subject matter; even if you are not very interested in music, you need to have ideas; it can also be useful for other things in life in which we also need to use our creative skills [1-154]".These views open the subject matter to *other ways of learning* that may favour a greater integration of music, the arts, and other subjects. One respondent states, "This subject matter was useful for learning teaching methods that are different from the more traditional and commonly known ones, which are related to memorization and picking up what is being verbalized by the teacher [1-39]". This interpretation triangulates with the majority of the participating students (91.7%) who responded that a creative approach is valuable for all subjects. Some comments made by students regarding *cross-curricular approaches* highlight this same interpretation: for example, "I have learned to relate concepts that seemed totally different and impossible to relate, in addition to being able to work creatively" [1-155].

Autonomy to develop students' own projects was also highly valued. The feeling of greater freedom has allowed many students greater autonomy, generating other types of learning dynamics. One participant wrote: "I have been taken out of the 'comfort zone' of my usual educational path, in which I have been told what and how to do things (...) I have now deeply enjoyed these kind of activities, as I was the one — along with my class mates — who decided what I wanted and how I was going to do it [1-266] ".

Students also valued art in school contexts much more positively. The reasons stated were, among others: the ability of art to develop creativity; the strong influence of art on personal growth; art as a vehicle for learning; the freedom granted to the student; the mediating role of art creating critical and proactive minds; the need of art in all knowledge areas towards a more

holistic approach; the benefits of art in students' development; and the capacity of art to give students freedom to proceed with their own development.

Out of this finding it can be inferred that the importance that these students now place on artistic work in the classroom is related to the development of creativity and to the cognitive, personal, and social development of the child, promoting, as mentioned by one student, "global learning." Thus, these students also began to deepen their perceptions about the possibility of an interdisciplinary work in which art is valued not as an "ornament" with a "decorative role" that embellishes the "more serious" disciplines, but as a set of languages that are epistemologically valid by themselves, and that allow other ways of thinking about and dialoguing with the world.

This sense of freedom helped to reinforce their self-confidence, offering them greater security in their decisions. As one participant remarked,

> "I have learned a lot to think for myself and to think about things thanks to the collaborative work that we have developed; no other teacher had ever worked with us using this methodology; usually teachers tell me what to do and give me the keys to do it, but in music didactics it has not been like that, which has allowed me to develop my creativity a little more [1-111]".

This statement is representative of the preferences towards creative approaches that most of the students manifested in the questionnaire.

This degree of self-confidence allowed a better development of their imagination and demonstrates how this might become a pathway to developing higher degrees of freedom that in turn, might allow students to explore the teaching and learning of music in a more conscious way. For example: "Here we were the ones defining what should be taught (…) In the beginning I didn't know which direction to take, nor did I understand what the teacher was asking, but then I saw it was about opening a space to develop our imagination and start connecting concepts [1-347]".

Discussion and Conclusions

From data analysis and interpretation, three essential themes emerged for discussion: creativity, collaborative work, and the relevance of an interdisciplinary approach to teaching and learning. These three themes are addressed here through two dimensions that seem to be essential for the music education of primary school teachers: a personal dimension and a professional one. The first refers to each student teacher's ability to overcome fears and false beliefs, and to become meaningfully engaged in projects similar to those discussed in this

study; the second is related to their competence to plan and create an encouraging and collaborative environment in the classroom, not only between pupils and teachers but also among pupils themselves (Cheung & Leung , 2013).

The findings of this study give us very positive indicators regarding these two dimensions. In fact, within the "personal dimension", it seems rather notable to point out the transformation that occurred among these students regarding their beliefs and perspectives towards the development of creative, collaborative and interdisciplinary approaches in the classroom (Liitos, et al., 2012). After the intervention, students felt much more confident to participate in activities that approached curricular contents in a transversal manner, departing from themes and key ideas, and focusing on creativity and collaboration (Biasutti, et al., 2015).

This self-confidence, and the capacity to overcome fears, seems to have been extended to the "professional dimension", and to the relevance and potentiality that such an approach might assume in teaching music education. Results indicate that participants in this study felt a new receptiveness towards further possibilities and perspectives to develop their work, implying other ways of conceiving musical activities and relating musical contents with the diverse areas of the curriculum (May, 2012; May & Robinson, 2016). In this sense, we might now affirm that the development of the projects *Circle of Sound* and *ShortStroke* improved students' knowledge, skills and attitudes towards the meanings of teaching and learning, emerging from creative approaches to didactic tools and materials, and reaching more integrative and holistic perspectives. These are the coordinates that made it possible for these student teachers to understand new concepts and develop musical skills across other knowledge areas, as well as to use music to understand different concepts and ideas within these same areas (Murillo et al., 2019)—in short, building socially shared knowledge.

When focusing on the findings discussed here, it is necessary to bear in mind that the expectations of the students in relation to their musical training at the university were not very high. In fact, most of them expected only to learn concepts, theories and some very basic instrumental practice. All this within a learning context characterized by a very well-defined teacher-centred script. When faced with higher degrees of freedom, and the invitation to critically analyse their work, most students immersed themselves in a process of self-reflection, re-evaluating concepts, ideas, and perspectives on what it means to make and teach music, much in the sense that is described by O'Neill (2014). This process triggered a feeling among students of openness to new teaching and learning possibilities — through projects involving sound exploration, improvisation, and composition — and to new ways of organizing classroom work in a more collaborative fashion.

Some resistances among participants arose mainly due to negative self-perception of their musical abilities that, most probably, can be traced back to their music education experiences during compulsory education (Pitts, 2009). Many of their music education experiences were related to music theory and to activities developed within the western musical repertoire (Aróstegui, 2016). This does not seem to be the right approach either for increasing opportunities in which students might create or for developing new connections with sounds and more contemporary languages using new tools and devices such as non-conventional musical instruments or digital technologies. These resistances might block what could become a more open and receptive attitude towards music pedagogy, in such a way that might enhance the development of curiosity and creativity (Zhuko, 2019). In order to make sure that these resistances do not extend to their university education (Tejada et al., 2020; Mota, 2015; Vries, 2015), it seems necessary to reduce traditional educational practices, where creativity plays a purely testimonial role (Seddon & Biassutti, 2008).

This last point is of great importance, as it could be inferred that the resistances and difficulties shown by generalist teachers in the development of creative activities seem to be closely related to their training or ways of interpreting creativity (Kokotsaki, 2012). Pedagogical interventions of a creative type that actively involve trainee teachers seem to consolidate their perceptions of the importance of a creative approach in the classroom (Cheung & Leung, 2013; Economidou, 2013). If, in addition, this approach also promoted reflection and critical thinking, as described in this paper, future teachers might go even further in their reflections, establishing important relationships between the way they work in their training period and the paradigms in which education and school are framed (Murillo et al., 2019).

The students in this study valued art in school very highly, with reasons such as: the capacity of art to develop creativity; the strong influence of art on psychic development; art as a vehicle for learning; the freedom given to the student; the mediating role of art in the need to create critical minds with initiative; the transferability of art to other curricular areas; the need for art in all areas of knowledge to have a total learning; the beneficial effects of art on the student body; and the capacity of art to give freedom to students in their own development (Corbisiero-Drakos, 2021). Thus, the importance that these students place on art in school is related to the development of creativity and to the cognitive, personal, and social development of the child, or as one participant put it, a "total learning". Thus, these students also began to perceive more clearly the possibility of interdisciplinary work where art is seen not so much as an ornament that embellishes the more serious work, but as a set of epistemologically valid languages by themselves, that is, as other ways of thinking to understand and dialogue with the world (Daly et al., 2016).

The results of this study suggest that a music education approach based on creativity, interdisciplinarity (Rosa-Napal et al., 2020; Thorburn, 2017), and inter-peer collaboration could facilitate greater understanding and favor greater motivation in generalist faculty in music and other subject area learnings (Burnard and White, 2008; Grainger et al., 2004). Likewise, it can be induced that teamwork was generally accepted by students, highlighting the importance of peer collaboration. Knowing how to work creatively and collaboratively is perhaps one of the most important skills in a person's social and working life (Biasutti et al., 2015). However, research is needed on aspects such as collaborative creation, given the resistance found in this intervention study, where there was a shift from an initial approach based on collaboration to one based on cooperation. As suggested by Cross et al. (2012), an empathic type of collaborative work could strengthen the type of relationships between students and teachers for the benefit of group creative processes, generating a feeling of joint project and "empathic community" (p. 17).

In this sense, and according to the results obtained, this study could generate in other similar contexts a certain applicability, or fittingness (Miles & Huberman, 1994): that is, similar results. Even so, and with all due caution, this type of proposal in initial teacher education could be a contribution in relation to the fact that it can indicate a way to reduce the gap between student teacher ambitions and self-perceived limitations. Therefore, we believe that collaborative and creative approaches should be insisted upon in teacher education, trying to show through didactic actions that, although collaborating implies discussing perspectives that may be contradictory, moments of discussion and participatory dialogue are opportunities for learning and synergy (Murillo et al, 2019).

Finally, it may be necessary to re-examine a paradigm of music education where the transmission of declarative and theoretical knowledge assumes a preeminent role, favouring another that might open the doors to new approaches to teaching music didactics and pedagogy within initial primary teacher education. As Liitos et al. (2012) stress, it is necessary to educate teachers so that they might become capable of developing creative, interdisciplinary and reflective classroom practices, while at the same time developing open and knowledgeable identities.

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