



## ARTICLE

# Knowing ‘how to create’ in order to know ‘how to teach’? Perceptions and conditioning of Spanish music teachers in secondary education

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## Abstract

Music teachers in secondary education tend to undervalue the professional competence of creating music, in response to educational models that prioritise the development of musical interpretation skills. The aim of this research is to identify the factors that contribute to this belief among teachers in Spain, by analysing the results of the Professional Competences of the Music Teacher questionnaire ( $n = 112$ ). Significant differences were found between age categories, as well as significant linear correlations between teachers’ perceptions of their preparation during initial training, their practical skills and habits, and the professional importance they attached to their competence in musical creation.

**Keywords:** musical creation; professional competence; music teacher; secondary education; teacher training

## Introduction

The topic of creativity is a recurring theme in contemporary research into musical education. The integration of everyday or ‘psychological’ creativity in the educational discourse, which pertains to the generation of novel and valuable ideas that are original to the individual, regardless of whether other individuals have had them before in historical terms (Boden, 1990), facilitates an increasing conceptualisation of the same as a further capacity that can be enhanced through education (Kokotsaki, 2011; Lage-Gómez & Cremades-Andreu, 2020; Devaney et al., 2024).

As Fautley (2024) refers to, ‘music education is often considered to be an example of creativity, and creating, composing, and making music are all thought to be creative acts in their own right’ (p. 91). In this regard, the majority of the peer-reviewed sources indexed in SCOPUS and WoS over the past three decades conceive creativity in terms of composition processes conducted within the classroom (Lage-Gómez, Chatelain, & Cremades-Andreu, 2023). In the present study, the terminological option of ‘creation’ is chosen given its agglutinative character: this encompasses not only composition and improvisation processes but also arrangements of pre-existing pieces, sound exploration or musical production and the incorporation of cross-disciplinary artistic languages (Stumpfögger, 2024).

The definitive impetus for musical creation is to be found in a generation of ‘composer-pedagogues’ from the United Kingdom (George Self, John Paynter, Brian Dennis or Peter Aston, among others), together with the Canadian Murray Schafer. The imprint of their approach is consolidated in the Music in the Secondary School Curriculum project led by John Paynter (1982), as a milestone in the integration of musical creation into Western curricula (Fautley & Daubney, 2019). The psychoeducational benefits of musical creation in classrooms have been documented

in various studies. These studies have demonstrated that musical creation can positively impact students' cognitive abilities, musical understanding and the development of skills. For instance, Berkley (1999) and Giddings (2013) have shown that musical creation can enhance students' musical understanding through direct application of learning. Additionally, Bolden (2014), Hogenes et al. (2016) and Cremades-Andreu and Lage-Gómez (2024) have demonstrated that musical creation can encourage motivation and engagement in process-oriented teaching processes. Furthermore, the socio-emotional domain has been identified as a beneficiary of musical creation in the classroom. This is evidenced by the development of the student's self-concept through freedom of expression through music (Beineke, 2017; Veloso & Carvalho, 2012), as well as the promotion of habits of coexistence and shared identity based on decision-making and group interactions (MacDonald & Miell, 2000; Veloso, 2017; Lage-Gómez & Cremades-Andreu, 2020).

Despite this, the literature agrees in highlighting a diminished commitment of teachers toward the implementation of creation. The recently published *The Routledge Companion to Teaching Music Composition in Schools* reports an international overview of the state of the art, noting how its presence 'is not universally accepted or adopted, and even in countries where it is more established, such as the UK and New Zealand among others, it is still an area of music education that is underdeveloped and perhaps misunderstood' (Devaney et al., 2024, p. 2).

In other words, while teachers tend to admit their own responsibility for providing teaching with and for creativity, they rarely recognise composition and improvisation among the kind of practices usually promoted in their teaching (Kladder & Lee, 2019). This could be attributed to a musical identity that rarely identifies with creation (Hargreaves et al. 2003, Finney, 2011), which leads not only to a low confidence in teachers' own abilities but also to a belief that their students are similarly incapable of engaging in creative pursuits (Shouldice, 2014; Bautista et al., 2018).

Clint Randles draws comparisons between the creative identity of pre-service teachers in the United States and other geographical contexts (Randles & Smith, 2012; Randles & Muhonen, 2015; Randles & Ballantyne, 2018; Randles & Tan, 2019), concluding that American teachers assume a lower comfort level when teaching composition and/or improvisation: 'they are less likely to put their creative identity (less than teachers in the other countries researched) to work in their future jobs as music teachers' (Randles & Tan, 2019, p. 209). Other studies have indicated that music teachers in Australia (Bernhard, 2013; Randles & Sullivan, 2013) and Finland (Partti, 2016) are also frequently perceived as lacking the requisite skills to teach music composition. Conversely, the research conducted by González-Moreno and Carrillo (2024) in Mexico is more optimistic, although the authors suggest that further study is required 'examining the correlation between the teachers' perceptions of competence with their level of achievement in composing, improvising, and arranging their own music, and with their effectiveness in teaching composition in basic education' (p. 250).

Recognising the degree of preparation and experience that music teachers admit to 'creating music' is conceived as a prerequisite towards effective music teaching. As Randles and Muhonen (2015, p. 63) indicate, 'in order for teachers to feel comfortable introducing students to music composition, they should first learn to create music themselves, thus establishing a creative identity themselves'. Likewise, Odena and Welch (2007) point out that teachers who have a greater background in composing and improvising are more likely to promote this type of dynamics in their classes, even consolidating them with greater success.

### Competency-based approach in the perception of secondary education teachers

The aim of this study is to identify the variables that significantly influence Spanish teachers' perceptions of their competence in musical creation as part of their professional identity. This section establishes a historical framework for the competency-based approach to the study of the professional profile of music teachers.

In response to the purpose of improving professional occupation standards, the demands of the labour market and rapid pace of social evolution, the competency-based approach has provided a conceptual framework for the identification of teacher professional profiles (Perrenoud, 2004). At the end of the 1960s, the establishment of competence lists for measuring teacher performance, known as Competency-Based Teacher Education (Mountford, 1976), was consolidated in the United States. Although this type of assessment is typically employed in response to pre-established control or certification systems, it can also be utilised for more flexible purposes, such as identifying potential limitations that could inform improvements in teacher training (Carrillo & Vilar, 2016).

The assessment of teachers' technical competence to create music has usually been operationalised in this type of studies as the ability to 1) make arrangements appropriate to the characteristics of the students, 2) improvise during classroom music practice and 3) compose short pieces for students in a variety of styles (Baird, 1958; Klotman, 1972; Taebel, 1980; Carrillo & Vilar, 2016). The descriptive and diagnostic nature of certain studies establishes enquiries in localised geographical contexts, through questionnaire-based data collection (Baird, 1958; Clinton, 1962; Taebel, 1980; Teachout, 1997; Leong, 1999; Ballantyne & Packer, 2004; Rohwer & Henry, 2004; Carrillo & Vilar, 2016), mostly based on Likert-type ratings.

From the United States, Clinton's (1962) research highlights the inadequacy of the preparation of Texas trainee teachers for composing and arranging, as perceived by Music Supervisors. Other American studies concur in establishing a clear distinction in teachers' beliefs regarding the level of professional priority given to their skills related to musical creation. Firstly, teachers place a relatively high value on their competence in making arrangements of pre-existing musical pieces: 15th from a list of 44 skills in Baird (1958) and 31st of 51 in Taebel (1980). Secondly, the competence to improvise is situated at a certain distance from the previous one, being understood mainly from the performance of accompaniments in the classroom: 32nd of 44 in Baird (1958) and 41st of 51 in Taebel (1980). Finally, American teachers tend to undervalue their ability to compose during their professional practice (Clinton, 1962). This is perceived as one of the lowest priority musical competences: 44th of 44 in Baird (1958) and 47th of 51 in Taebel (1980).

From Australia, Ballantyne and Packer's (2004) research points out how early-career music teachers recognise certain deficiencies in their training for musical composition and creativity, due to an excessively theoretical and not very practical approach. For their part, Carrillo and Vilar (2016) found that teachers of music in primary and secondary education in Catalonia (Spain) possess a limited technical proficiency in musical creation, which falls below their abilities for listening and interpretation. Additionally, this sector of teachers admits to considering the competence to create music as the least professionally relevant (10th from a list of 10 competences) (Carrillo & Vilar, 2016).

### Idiosyncratic profile of music teachers in secondary education in Spain

The present study investigates the perception of secondary education music teachers in Spain, more specifically in the north-western territory of Galicia.

Regarding educational competences, and in line with the OECD proposals, the Spanish government is establishing common guidelines through the current Education Law 2020 (LOMLOE). However, each region has a certain flexibility when it comes to specifying the curriculum in its corresponding territorial area, which is, in turn, completed by the schools under its jurisdiction.

The Education Law 1990 (LOGSE) established Music as a compulsory subject in secondary education and set forth the requisite qualifications for music teachers. From that point onwards, the presence of musical creation was to become a permanent feature of the Spanish curriculum, reaching its zenith in the Education Law 2006 (LOE). This legislation broadened the concept of

musical creation, with composition being considered a viable and pedagogically beneficial educational proposal. Furthermore, it introduced the use of electronics and computers in the sound processes of multi-artistic projects, including the recording of compositions created in the classroom (Real Decreto, 1631/2006). Subsequent reforms have been continuous, although there has been a shift towards a more conceptual or academic approach (Real Decreto, 1105/2014). In the case of Galicia, the documentary review carried out by Castro-Alonso & Chao-Fernández (2022b) concludes that the level of detail provided in successive music curricula may be insufficient for teachers who are less familiar with or have less pedagogical references for the proposal of collaborative musical creation processes in the classroom. Moreover, the nature of the proposals promoted is markedly traditional, with minimal correlation with the pedagogical proposals advanced by the aforementioned generation of composer-pedagogues (Castro-Alonso & Chao-Fernández, 2022b).

There has been a lack of studies that have attempted to diagnose how music teachers teach the creation in Spanish secondary education classrooms. Nevertheless, authors such as Rusinek and Casas-Mas (2024) have noted that a generalised practice typically encompasses listening to music, playing recorders, the utilisation of percussion instruments in ensemble, pedagogical dances and theoretical learning through the use of textbooks. In contrast, Cremades-Andreu's research (2019) indicates that musical creation proposals have had a minimal or non-existent impact on former students, either due to their absence or dissatisfaction with the proposals.

The most prevalent academic background for secondary music teachers in Spain is a Bachelor's Degree in Music (Interpretation) or Musicology (Carrillo & Vilar, 2016; Colás-Bravo & Hernández-Portero, 2017; Castro-Alonso & Chao-Fernández, 2022a). Specialised music education is provided by public or private institutions designated as conservatories, which are structured in three grades: Elementary Grade (4 years), Professional Grade (6 years) and Higher Grade (4 years). The institutionalised music teaching model prioritises the technical and interpretative mastery of a canonically established repertoire (Murillo & Tejada, 2022) generally to the detriment of creation, which is typically limited to an imitation of compositional styles or 'pastiche composing'. The subjects of harmony, music analysis and the fundamentals of composition have been conceptualised in a manner that is predominantly theoretical and analytical, rather than creative and productive (Rusinek & Casas-Mas, 2024, p. 370).

Furthermore, in order to gain access to the role of music teacher, it is necessary to obtain pedagogical accreditation in the form of a 1-year university Master's Degree in Secondary Education. Although certain authors have indicated a progressive improvement in pre-service teachers' satisfaction rates (López & Botella, 2022), Aróstegui and Fernández-Jiménez (2023) point out that there is still some room for improvement, both in terms of its limited time provision and the lack of research involved in the evaluation and improvement of the teaching of teacher trainers. Serrano, Zamorano, and González-Martín (2020) add the excessive compartmentalisation of the Master's to the detriment of interdisciplinary work, while Blanco and Peñalba (2020) emphasise the insufficient presence of creation and sound exploration in the study plans.

In line with Urrutia and Díaz (2013), the aim of musical education at secondary level should be to pursue the holistic development of the student, through experiential processes in the classroom that allow them to develop competences by stimulating their perception, sensitivity, reflection, communication and creative expression. Consequently, further research is required on the specific circumstances of music teachers in Spain. This is necessary in order to optimise training processes and to promote a methodological openness that expands the horizon of creative possibilities in the classroom.

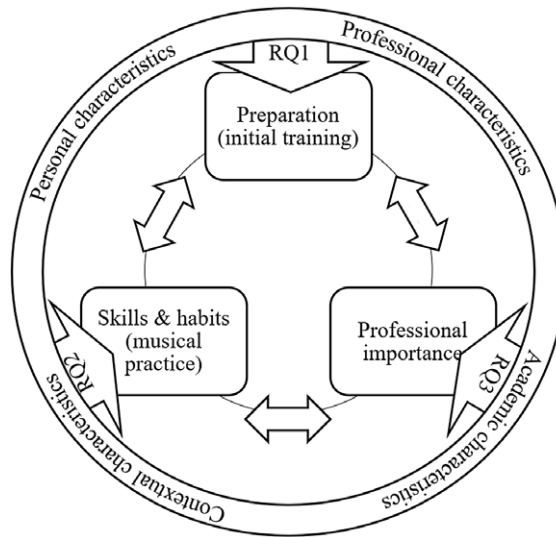


Figure 1. Research questions.

### Purpose and research questions

This research aims to give voice to a sector of professionals scarcely documented in the study region (Galicia), knowing their perceptions about ‘how to create’ in order to know ‘how to teach’, as a first step in establishing training measures in line with the needs and realities profiled by in-service teachers. The purpose of this article is to recognise which variables significantly influence teachers’ appreciations of their competence in musical creation, as part of their professional identity. The following research questions are therefore posed (Fig. 1):

- RQ1. What factors influence in how teachers perceive their preparedness to create music based on their initial training?
- RQ2. What factors influence the music-making skills and habits that the teachers admit to?
- RQ3. What factors influence the perceived importance of teachers’ professional competence in creating music in their daily work?

As Partti (2016) argues, several studies infer how teachers’ belief in their own abilities influences their own teaching practices, sometimes even more than their own actual abilities. The correlation between the level of preparation and the specific musical skills assumed (Odena & Welch, 2007), as well as the possible effects of certain personal, academic, professional and contextual characteristics inherent to the sample (Carrillo & Vilar, 2016), are therefore studied.

### Research method

#### Instrument

The 107-item questionnaire Professional Competences of the Music Teacher (Carrillo & Vilar, 2016) allows for collecting the perception of music teachers regarding a validated list of 10 professional competences (Carrillo & Vilar, 2014), grouped according to their nature into: transversal competences linked to the teacher’s professional development (C1), the teacher’s performance in the classroom (C2), the teacher’s performance within the school (C3) and the

teacher's ethical actions (C4); musical competences linked to musical listening (C5), musical interpretation (C6) and musical creation (C7); and pedagogical competences linked to planning (C8), conducting and assessing (C9) and adapting (C10) teaching–learning situations.

Using Likert 6-point scales (0 = 'not at all' and 5 = 'very much'), the participants rank their view of the importance of each competence in the exercise of their profession (block I, 10 items), the level of preparation for these competences during their initial training with a view to satisfactory professional performance (block II, 10 items) and the level of practical use of these competences (block III, 87 items). The number of questions in this last block responds to the parameterisation into sub-dimensions of each of the 10 competences, with the aim of facilitating a more reliable assessment of the teachers' day-to-day practice (Carrillo & Vilar, 2016). Regarding the competence related to teacher training for musical creation (C7), its definition explicitly encompasses those skills or habits pertaining to composition, improvisation, sound experimentation, transcription of creations and arranging (Carrillo & Vilar, 2014), as delineated in six items.

The questionnaire facilitates the generation of a comprehensive profile for each participant, gathering data pertaining to a multitude of variables. These include personal characteristics such as gender and age (up to 29, 30–39, 40–49, 50 or more); professional characteristics, such as years of teaching experience (up to 4, 5–10, 11 or more) and responsibilities carried out in the workplace beyond teaching music; academic characteristics, such as access qualifications, name and location of educational institutions of initial training, and in-service training options; and contextual characteristics, such as the territorial location of the current job and the socio-economic level of its students.

An adaptation of the original instrument is necessary due to the geographical and political conditioning of the population under study. The items inherent to the academic options (qualifications, educational institutions and in-service training courses) and work contexts (territorial location) are modified. Furthermore, those professional, academic and contextual options for music teaching staff outside secondary education are omitted (the original instrument contemplates the participation of primary education teachers). Furthermore, an initial clause has been incorporated to encourage the collection of assessments that are not subject to health restrictions due to the ongoing global pandemic of the novel coronavirus (COVID-19) during the data collection period (May 2021).

The validation of the adaptation of the instrument is carried out by a committee formed by an expert in Educational Psychology and an expert in Music Education. A pilot test was conducted on the digitised instrument with a sample of seven in-service music teachers. A final open-ended question was included to ascertain the participants' perceptions and the estimated duration of the questionnaire. The feedback was favourable, despite the large number of items, indicating an approximate duration of between 20 and 30 minutes.

### **Data collection procedure**

Since public access to the list of the teacher population is not available, the digitised version of the questionnaire is disseminated in successive mailings through the institutional contact of each of the 501 centres available in Galicia (May 2021). In each mailing, the management teams are asked to distribute the questionnaire among the music teaching staff, attaching the informed consent, with a description of the purpose of the study and the nature of the participation, together with the ethical and legal commitment inherent to the research, by means of data collection protected by anonymity.

The sample corresponds to a convenience sample, as although the email probably reached most schools, the researchers could not control whether principals forwarded the message to teachers (Partti, 2016). The mailing strategy consolidated a participation of 112 teachers, which represents a return rate of 22.4%. Taking into account the number of responses and the geographical distribution of the provinces, it can be considered that the sample reflects in a reasonably complete

way the opinions of Galician music teachers.<sup>1</sup> A Cronbach's alpha of .962 was obtained in favour of the reliability of the measurement scale in terms of the internal correlation of its items, although it should be noted that the high number of items could affect the calculation of the coefficient.

### **Participant population**

The sample is made up of teachers aged between 40 and 49 (59.8%), followed by teachers aged 50 and over (25.9%). The participants identify themselves as 'women' (57.1%), have been teaching in secondary education for 11 years or more (86.6%) and have a permanent contract (91.8%). This study has a majority presence of professionals linked to public administration schools (80.4%) and who have students with a socio-economic level understood as 'medium' (75.9%). Their professional functions parallel to teaching music tend to be tutoring a group of students (50.9%), teaching non-music subjects (47.3%) or participating in the management of the centre (30.4%), as part of their responsibilities at school.

The musical training of the participants prioritises higher studies in interpretation (48.2%) and musicology (37.5%), with 7.1% of them having both degrees, while 3.6% have higher studies in composition. Beyond the pedagogical accreditation required in Spain, 10.7% of the sample had higher studies in music pedagogy, although some teachers admitted having attended courses in Orff methodology (38.4%), Kodály (25.0%) or Dalcroze (8.9%). As for the location of the academic trajectories, 50.9% of the teachers develop their higher education entirely in Galicia, while the remaining 42.9% develop their studies partially or totally in centres in the rest of Spain and 6.3% totally or partially abroad.

It is worth highlighting the eclectic presence of non-music degrees among the academic profiles of the teaching staff in branches such as Philology, History, Fine Arts, Psychology, Physics or Law (19.7%), being their only access qualification for 4.5% of the participating teachers.

### **Data analysis**

The statistical processing and analysis is carried out using IBM SPSS software version 27, supervised by an expert in Statistical Analysis. The type of test performed starting in all cases from a significance level of  $\alpha = 0.050$  in the determination of each hypothesis contrast.

The resolution of the RQs related to this study is undertaken in the search for possible conditioning factors to the type of response given by teachers. In order to conclude the existence of significant differences in teachers' specific insights, hypothesis tests are established for each demographic group according to the personal, professional, academic and contextual characteristics previously listed. In the case of the analysis of individual variables of a discrete nature, Kruskal–Wallis *H*-test coefficient (*K*) reports the magnitude of the difference and the resulting *p*-value being Bonferroni-corrected for comparisons of more than two groups (RQ1, RQ2 and RQ3). In the case of the analysis of summation variables that take on a continuous nature (RQ2), one-factor ANOVA test for independent samples is established for the sum of the sub-dimensions inherent to the practical use of the C7 (Table 2). In this case, for those demographic groups with an insufficient number of data ( $n < 30$ ), the Kolmogorov–Smirnov–Lilliefors and Shapiro–Wilk tests are applied to verify the normality of the data distribution. If the distribution of the contrasted variables is considered non-normal, the Kruskal–Wallis *H*-test is used. Subsequently, the homogeneity of the variances is studied by applying Levene's test, although in the case of equality between variances, the means are contrasted by means of a more robust technique, the Welch test. Finally, in order to avoid false positives in significance, post hoc *p*-value correction tests (Scheffé and Tukey) are applied, establishing questions for each demographic group.

Additionally, in order to determine the possible significance of the linear relationship (or association) between pairs of discrete variables, its strength and direction are determined by

Spearman's correlation coefficient ( $r_s$ ). This selection is undertaken after checking the homogeneity of variances and having a number of pairs  $n > 30$  (Tourón et al., 2023).

## Results

As a background to the resolution of the RQs, a synthesis of the descriptive analysis is established (Table 1), together with the comparative analysis of the ratings given to the items related to the musical creation competence (C7) with respect to the rest of the competences, developed in greater detail in a previous publication (Castro-Alonso & Chao-Fernández, 2022a):

- The participating teachers assume on average to be 'quite' prepared to create music based on their initial training ( $M = 3.14$ ;  $SD = 1.19$ ), in fact, significantly more than for certain transversal competences such as C4 ( $p = .046$ ), C2 ( $p = .010$ ) and C3 ( $p < .001$ ), as well as for the pedagogical competences C8 ( $p < .001$ ), C10 ( $p < .001$ ) and C9 ( $p < .001$ ), after performing the Wilcoxon signed-rank test. However, it is also confirmed that teachers perceive themselves to be significantly less prepared for musical creation than for interpretation ( $p = .004$ ) and listening ( $p < .001$ ).
- The sum of the ratings concerning the practical use given to music-making skills (broken down in Table 2) places it as one of the least recognised ( $M = 3.07$ ;  $SD = .99$ ). This difference is statistically significant with respect to competences C6 ( $p < .001$ ), C8 ( $p < .001$ ), C1 ( $p < .001$ ), C10 ( $p < .001$ ), C2 ( $p < .001$ ), C9 ( $p < .001$ ), C5 ( $p < .001$ ) and C4 ( $p < .001$ ), after performing the *T*-test for two related samples.
- Nevertheless, the participation gives on average 'a lot' of professional importance to the competence for musical creation ( $M = 3.59$ ;  $SD = .91$ ), although as one of the least prioritised competences: teachers give a significantly higher professional value to certain transversal and pedagogical competences, such as C1 ( $p = .041$ ), C10 ( $p = .010$ ), C2 ( $p < .001$ ) and C4 ( $p < .001$ ), as well as the competence for musical interpretation ( $p = .024$ ) and musical listening ( $p < .001$ ).

The principal findings are presented below in alignment with the RQ previously outlined. Due to the constraints of space, only those results based on statistically significant evidence in the identification of factors involved in teachers' perceptions of their music-making competence are included.

*RQ1. What factors influence in how teachers perceive their preparedness to create music based on their initial training?*

As a sign of the homogeneity of the responses, there is insufficient evidence to conclude the existence of significant differences according to the different academic degrees of access, nor according to the personal, contextual and professional characteristics taken into account in this research ( $p > .050$ ).

However, there is an idiosyncratic finding in the study territory: the Kruskal–Wallis *H*-test confirms the existence of significant differences in the specific perception of teachers according to the place where they completed their higher music studies at the conservatory ( $K = 7.29$ ;  $p = .026$ ): the pairwise comparison of demographic groups and the consequent Bonferroni correction ( $p = .021$ ) limits this finding to the lower degree of preparation for musical creation assumed by teachers trained in conservatories exclusively in Galicia ( $M = 2.98$ ;  $SD = 1.09$ ), with respect to those trained totally or partially in conservatories in the rest of Spain ( $M = 3.67$ ;  $SD = 1.24$ ).



**Table 1.** Teacher Ratings for Each Competence

		Preparation		Practical uses		Professional importance	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Transversal competences	C1. Professional development of teachers	2.98	1.17	3.55	.58	3.74	.86
	C2. Teacher performance in the classroom	2.85	1.42	3.63	.56	3.96	.89
	C3. Teacher performance in the school context	2.56	1.45	3.14	.87	3.58	.94
	C4. Ethical behaviour of the teacher	2.93	1.40	3.95	.58	4.08	.81
Musical competences	C5. Development of skills linked to musical listening	3.66	.97	3.87	.53	4.14	.78
	C6. Development of skills linked to musical performance	3.38	1.10	3.35	.75	3.76	.86
	C7. Development of skills linked to musical creation	3.14	1.19	3.07	.99	3.59	.91
Pedagogical competences	C8. Planning teaching–learning situations	2.81	1.26	3.46	.62	3.58	.79
	C9. Conducting and assessing teaching–learning situations	2.76	1.27	3.74	.66	3.52	.78
	C10. Adaptation of teaching–learning sequences	2.79	1.34	3.68	.71	3.79	.75

**Table 2.** Teacher Ratings of the Items Related to the Practical Uses Given to the Competence for Musical Creation (C7)

Items	M	SD
5.10. When I create music, I do it to communicate feelings, emotions, sensations or ideas.	2.62	1.97
5.11. I integrate other languages (plastic and corporal) in musical creation.	2.63	1.21
5.12. I use different elements (voice, instruments, my own body and other materials such as toys, everyday objects and ICT resources) in my musical compositions.	2.89	1.32
5.13. It is easy for me to improvise melodies and accompaniments with the voice, with instruments and with sounds produced by my own body.	3.13	1.25
5.14. It is easy for me to transcribe created musical works into a score.	3.62	1.11
5.15. It is easy for me to adapt musical pieces to different levels, musical formations or learning contexts.	3.55	1.06

*RQ2. What factors influence the music-making skills and habits that the teachers admit to?*

As Table 3 shows, there is a significant linear correlation ( $p < .001$ ) between the degree of preparation that teachers perceive on their initial training with respect to:

- Their openness in involving the plastic and corporal arts, and in the integration of heterogeneous sound resources such as the voice, musical instruments, the human body, sound objects or information and communication technology (ICT) in their own musical creations.
- Their self-perceived skill in improvising melodies or accompaniments, transcribing their own creations and making musical arrangements adapted to the condition of their pupils.

In all cases, the correlations are direct (positive Spearman's Rho), so that the greater the assumed preparation, the greater the perceived openness or skill (and vice versa).

From a less specific point of view, teachers' practical uses of musical creation differed significantly by age group ( $F = 3.27$ ;  $p = .042$ ), that is, teachers up to 39 years old ( $M = 3.43$ ;  $SD = .86$ ), 40–49 years old ( $M = 3.11$ ;  $SD = .74$ ) and 50 years old or more ( $M = 2.82$ ;  $SD = .82$ ). After performing the Tukey and Sheffé post hoc multiple comparison of age groups (Table 4), it can be confirmed that the level of skill and/or practical habitus by younger teachers (up to 39 years old) is significantly higher than that indicated by older teachers (50 years old or more). In more detail, such behaviour is extrapolated to certain items (Table 2), even statistically significant in the following cases:

- Openness in the involvement of a heterogeneity of sound resources during the creative act, such as the voice, musical instruments, the human body, sound objects or ICT ( $K = 8.80$ ;  $p = .012$ ): the Bonferroni adjustment ( $p = .009$ ) confirms that the view of professionals up to 39 years old ( $M = 3.56$ ;  $SD = .34$ ) is significantly more positive than that of teachers aged 50 or more ( $M = 2.45$ ;  $SD = .27$ ).
- The assumed skill level for making arrangements ( $K = 6.88$ ;  $p = .032$ ): the Bonferroni adjustment ( $p = .028$ ) allows us to conclude that the confidence of teachers up to 39 years old ( $M = 4.13$ ;  $SD = .22$ ) is significantly higher than that of professionals aged 50 or more ( $M = 3.24$ ;  $SD = .22$ ).

Such a trend could also be extrapolated to perceived improvisation skill in the case of a larger sample size, as the Bonferroni adjustment is close to the significance limit ( $p = .057$ ).

**Table 3.** Correlations Between Perceived Preparation and Practical Uses Given to the Competence for Musical Creation

		5.10	5.11	5.12	5.13	5.14	5.15
Preparation (C7)	Spearman's Rho	.207	.312*	.333*	.329*	.365*	.348*
	Sig. (bilateral)	.069	<.001	<.001	<.001	<.001	<.001

\*There is a significant difference ( $p < .050$ ).

**Table 4.** Multiple Comparisons of Age Groups for Teachers' Use of Musical Creation in Their Practice

	Multiple comparisons of age groups	Mean difference	Standard error	Sig.
Tukey	Up to 39 – 40 to 49	.32	.22	.304
	Up to 39 – 50 or more	.61	.24	.036*
	40 to 49 – up to 39	-.32	.22	.304
	40 to 49 – 50 or more	.29	.17	.222
	50 or more – up to 39	-.61	.24	.036*
	50 or more – 40 to 49	-.29	.17	.222
Scheffé	Up to 39 – 40 to 49	.32	.22	.338
	Up to 39 – 50 or more	.61	.24	.046*
	40 to 49 – up to 39	-.32	.22	.338
	40 to 49 – 50 or more	.29	.17	.253
	50 or more – up to 39	-.61	.24	.046*
	50 or more – 40 to 49	-.29	.17	.253

\*There is a significant difference ( $p < .050$ ).

For the rest of the personal, professional, academic and contextual categories, there is no evidence of significant differences in the RQ2 study, again demonstrating the homogeneity of the responses.

*RQ3. What factors influence the perceived importance of teachers' professional competence in creating music in their daily work?*

As a continuation to the previous RQ, the statistical data determine the existence of a significant linear correlation ( $p < .001$ ) between the preparation assumed by the participating teachers and the level of professional relevance given to the competence for musical creation (Table 5). Again, this is a direct correlation: the greater the perceived preparation, the greater the professional importance given (and vice versa).

Also, certain practical uses recognised by the participants correlate in a statistically significant way ( $p < .050$ ) with the priority given to the competence for musical creation (Table 6); this is the case of:

- The teacher's habitus for creating music in their musical practice.
- The degree of openness to integrate heterogeneous sound resources in their compositions.
- The assumed skill in improvising melodies or accompaniments, transcribing their own creations and making musical arrangements adapted to their students.

**Table 5.** Correlation Between Perceived Preparation and the Professional Importance Attributed to Competence in Musical Creation

		Professional importance (C7)
Preparation (C7)	Spearman's Rho	.396*
	Sig. (bilateral)	<.001

\*There is a significant difference ( $p < .050$ ).

**Table 6.** Correlations Between the Professional Importance Attributed to Competence in Musical Creation and Teachers' Use of Musical Creation in Their Practice

		5.10	5.11	5.12	5.13	5.14	5.15
Professional importance (C7)	Spearman's Rho	.267*	.110	.253*	.188*	.335*	.268*
	Sig. (bilateral)	.018	.248	.007	.047	<.001	.002

\*There is a significant difference ( $p < .050$ ).

As in the previous cases, Spearman's Rho is positive, so that a greater perceived habit or skill translates into a greater professional awareness in favour of the teacher's competence for musical creation (and vice versa).

As in the previous results (RQ2), the existence of significant differences in teachers' perceptions is confirmed ( $K = 7.97$ ,  $p = .019$ ) according to whether they are under 40 years old ( $M = 4.00$ ;  $SD = .82$ ), between 40 and 49 years old ( $M = 3.67$ ;  $SD = .79$ ) or 50 years old or more ( $M = 3.17$ ;  $SD = 1.07$ ). The multiple comparison of age groups and the Bonferroni correction (Table 7) show that teachers aged 50 or more give significantly lower professional value to the competence for musical creation than teachers up to 39 years old ( $p = .012$ ). Greater participation could confirm that the perception of professionals aged 50 or more is also significantly less than that of teachers aged 40–49, with a  $p$ -value at the limit of significance ( $p = .050$ ).

Again, for the rest of the personal, professional, academic and contextual categories, there is no evidence of significant differences for RQ3. In any case, the Kruskal–Wallis test reports a specific differentiation between teachers' opinions according to the provincial location of their workplace, a result that is possibly significant with a greater number of participants ( $K = 7.82$ ,  $p = .050$ ).

## Discussion and conclusions

The contribution of this study is to identify the factors that contribute to the limited priority that secondary school teachers have historically given to their capacity for music making (Baird, 1958; Clinton, 1962; Taebel, 1980; Carrillo & Vilar, 2016; Ballantyne & Canham, 2023), as a preliminary step to understanding the state of music making in the classroom. As Shouldice (2014, p. 226) clarifies, 'it makes sense that teachers who believe composition is important are more likely to engage their students in composing while teachers who believe composition is less important are less likely to do so'. Authors such as González-Moreno and Carrillo (2024) emphasise the significance of teachers' training, skills and experience in musical creation as prerequisites for their involvement in the classroom, in order to provide the necessary guidance and assistance: 'it is clear that teachers must create an enriching environment and act as a role model for the students through their own practice' (p. 247). Schmidinger (2024) also outlines the advantages of collaboration with composers in the classroom, which can foster the creative energy of students and expand the scope of teaching methods in composition, offering them new artistic perspectives.

**Table 7.** Multiple Comparisons of Age Groups for the Professional Importance Attributed to Competence in Musical Creation by Teachers

	Test statistic	Std. error	Std. test statistic	Sig.	Adj. sig. (Bonferroni)
50 or more – 40 to 49	14.53	6.83	2.13	.017*	.050
50 or more – up to 39	25.56	9.57	2.67	.004*	.012*
40 to 49 – up to 39	11.03	8.55	1.29	.099	.296

\*There is a significant difference ( $p < .050$ ).

Despite this, Spanish teachers tend to postpone the professional value of the competence to create music in their profession, at a considerable distance from the possibilities offered by their musical listening and performing skills (Carrillo & Vilar, 2016; Castro-Alonso & Chao-Fernández, 2022a). In the search for answers, the level of preparation perceived by teachers from their initial training acquires a conditioning value in the nature of the response. International studies such as those by Ballantyne (2005), Hallam et al. (2009) or Partti (2016) have shown how the influence of the opportunities teachers have during their studies to build their own identity as musicians is directly related to the confidence they feel as music teachers. The results of the present investigation show that teachers who admit to a more proactive and open-minded musical life in terms of musical creation also prioritise its importance as a professional value. This is in line with previous studies, such as that developed by Odena and Welch (2007), with teachers who have more enriched musical trajectories being those who are more willing and effective in implementing creativity with their students. On the contrary, the ‘cycle of composing exclusion’ enunciated by Devaney et al. (2024, p. 186) explains how a music teacher who has no experience of composing is unlikely to choose to teach it to his or her students due to their lack of familiarity, which, in turn, leads them to acquire limited opportunities to create, thus repeating the cycle when they enter the profession.

However, the present research does not contemplate a specific analysis of the teachers’ pedagogical approach, this is, how they implement curricular proposals related to improvisation, composition or arranging, nor the frequency with which they do so. Its motivation is to highlight the training deficit of teachers in musical creation, which is associated either with a limited mobilisation from their practice or with a relativisation of its importance as a professional competence for teachers.

In this respect, there are no significant differences in the perceptions of teachers according to their entry qualification in terms of their perceived level of preparation for musical creation. This could be due to the characteristics of the participants in this study, who perceive a homogeneous musical training in this sense. In any case, the traditional approach to music teaching in Spanish conservatories, in a way ‘inherited from the French training tradition in music theory and solfa’, tends to provide ‘a traditional technical training that rarely incorporates elements of improvisation or composition’ (Rusinek & Casas-Mas, 2024, p. 369). This seems to be particularly noticeable in the territory studied, Galicia, and confirms the need for further analysis of the reality of teacher training in conservatories in this territory, as well as comparative analyses with other regions of Spain, in order to extend this finding to a possible generalised detachment of teachers from the experience of musical creation processes during their initial formation.

The achievement of significant results regarding the age factor does not directly correspond to the assumed level of preparation, so that an improvement of the training processes cannot be explicitly inferred on the basis of the participation assessments. However, younger in-service teachers (up to the age of 39) are more open in terms of their willingness to include a greater variety of sound options in their own musical creations, as well as a greater self-perceived ability to make arrangements. It should be noted that a belief in one’s own abilities does not *per se* imply a willingness to be more pragmatically efficient, although it may influence one’s own teaching practices, as Partti (2016) argues. In her study in Finland, teachers aged 30–39 also rated their own

teaching competence in creative music production more positively than the other age groups in the study.

The higher degree of ‘self-efficacy’ among younger teachers may be due to their closer proximity to the completion of their musical studies (Ballantyne & Canham, 2023). In this aspect, Randles and Ballantyne (2018) refer that the ‘perceptions of self-efficacy rapidly change into the early years of teaching, and that the pre-service teachers’ creative identities might differ significantly from their creative identities when in their first teaching position’ (p. 239). This condition, in a certain sense, could clarify the type of significant results obtained for the age groups, given that most participating teachers have a primary and/or secondary schooling prior to the specific incorporations established in the LOGSE (1990). In this sense, Langley (2018) points to the lesser openness to creativity on the part of older teachers, mainly due to the lack of training on how to implement it effectively in their teaching. This may also explain the significantly lower value that participants aged 50 or more place on the teacher’s competence to ‘know how to create music’. Additionally, the effect of the generational component is detected in terms of openness to the involvement of sound elements beyond the traditional ones, such as the case of objects or ICT. In relation to the latter, research such as that of Martos, Pérez-García, & Bernal (2015) agrees on a greater reticence, mistrust and even rejection among older music teachers in secondary education as ‘digital immigrants’ towards the involvement of technological resources.

As Randles and Muhonen (2015) point out, the lack of specific knowledge for musical creation is seen as a spur to the teachers’ lack of comfort when it comes to considering it as a teaching strategy. Additionally, a lack of affinity for composition as part of the teacher’s musical identity (Finney, 2011) could also contribute to the conditioning of their own beliefs about what is possible or not possible in a classroom (Shouldice, 2014; Bautista et al., 2018; Devaney, 2023). The results of this study highlight how the lower intentionality towards real experimentation with creative proposals during initial training correlates with the type of habits and/or skills that teachers admit to in their subsequent musical practice. Thus, the professionals who confirm having less technical preparation for musical creation are those who assume a greater inactivity and/or traditionalism in their habits.

In any case, the results are limited by the idiosyncrasies of their participation, which may or may not be generalisable to educational realities in other countries. The Spanish context is an incomparable framework to that of other countries where musical creativity – and especially musical creation – has a long curricular tradition as a practice integrated into the educational activity of secondary schools (Randles & Muhonen, 2015; Fautley & Daubney, 2019), with the consequent methodological asynchrony that this implies.

The competency-based approach has provided a suitable approach to identifying the limitations that allow optimising teacher training, complementing and updating previous findings developed in Spain (Carrillo & Vilar, 2016). As future lines of action, it is considered necessary to further explore the training processes of music teachers in secondary education in Spain, specifically, the type of models or acting roles for musical creation assumed in university teacher preparation programs (Blanco & Peñalba, 2020) and the specific roots of composition-based pedagogies in schools (Urrutia & Díaz, 2013; Partti, 2016). This will help to shape future proposals for improvement that contribute to the holistic development of teachers’ professional identities, from the previous generation of spaces to the development of their identity as creators (Randles & Tan, 2019; Ballantyne & Canham, 2023), with the consequent benefit to the quality of education in more effective and creative secondary classrooms.

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## Note

**1** The distribution of registered schools in Galicia by province is as follows: 195 schools in A Coruña (38.9%), 180 in Pontevedra (35.9%), 69 in Lugo (13.8%) and 57 in Ourense (11.4%). On the other hand, the distribution of participating

teachers by province is as follows: 54 teachers in A Coruña (48.2%), 34 in Pontevedra (30.4%), 13 in Lugo (11.6%) and 11 in Ourense (9.8%).

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