











teacher in contrast with the music specialist, through the development of creative activities, taking as a reference point both their prior knowledge and their professional experience. To do this, they designed a pilot study in which they analysed the behaviour and subjects, including specialist and generalist teachers and their respective pupils. The conclusions of this study demonstrate the importance of teaching experience in the educational specialisation, indicating that this experience is not a vital requirement in teacher training. On the contrary, they emphasised the need to work on and cover in greater depth, from the lowest levels of teaching, on performing creative activities.

Consequently, it seems to be clear that the studies consulted agree on the limited musical training of generalist teachers for their future work teaching music in primary school classrooms. Even so, they show that this problem can be resolved through a greater knowledge of the subject, and so it is necessary to increase the amount of time dedicated to theory and practice in this subject in the curriculum of the degree in primary education.

### 3. Objectives

The aim of this research centres on the level of assimilation of musical content attained by primary school teaching students in three public universities in the Community of Madrid; secondly, to examine what music training they have

received depending on the university and to establish what value the knowledge of music the students acquired from these courses has for them in their future teaching practice.

## 4. Method

### 4.1. Sample and Participants

The participants in this research were 301 students who had taken the music module while studying for a degree in primary school teaching at one of three of the public universities with the largest number of students enrolled in the Community of Madrid. Of these students, 100 said that their knowledge was limited to that acquired during compulsory education.

With regards to gender distribution, it should be noted that in Spain most primary education teachers are women. The data obtained in this study is consistent with the proportion of teachers by gender in Spain.

Consequently, the decision was taken to use a simple allocation, regarding each of the participating centres as a stratum in which the students who had studied the music module in different morning and afternoon groups were surveyed.

established that the total number of students enrolled on this subject in the participating centres was 755. Therefore, taking a confidence level of 97%, a sampling error of 5%, and assuming a variance

value of 50%, the minimum size of the sample should be 290 students. However, the final sample was slightly larger than the minimum, comprising 301 students (see Table 1).

TABLE 1. Sample size distributed by centres.

Centres	N (total) students	Final sample
Complutense University (1)	332	101
Universidad Autónoma (2)	288	100
Universidad de Alcalá (3)	135	100
<b>TOTAL</b>	755	301

Source: Own elaboration.

Before continuing, it should be noted that the curricula for the degree in primary education in each of the participating centres contain a compulsory module dedicated to learning music content. At the Complutense University it is worth 6 ECTS credits and focuses on learning of the following aspects: (a) parameters of sound, (b) elements of music, (c) musical listening, (d) improvisation, creation, and interpretation, (e) singing, and (f) rhythm and movement. At the Universidad Autónoma it is worth 9 ECTS credits and its content is structured around: (a) primary education curriculum, (b) developing educational proposals, (c) musical language, (d) history of music and Spanish folk music, (e) vocal education and movement, and (f) programming and teaching units. Finally, at the Universidad de Alcalá, it is worth 6 ECTS credits and covers: (a) elemental metric-rhythmic structures, (b) intervals,

scales, modes, tonalities, and chords, (c) computer resources for basic music reading and writing, (d) acoustics, and (e) musical instruments in primary education. As can be seen, these modules have in common the teaching of content on musical language, physical expression, musical performance, and the application of music teaching resources. These are the basic foundations on which the teaching of the music education curriculum in the primary school classroom is based and are the basis for drawing up the items on the questionnaire. Similarly, to teach all of this content, generalist teachers must not only acquire exclusively musical skills but also educational ones in order to know how to use the resources, plan activities, and relate music to the other subjects in the curriculum in a way that is appropriate to the characteristics of this stage. To do this, they must plan their activities for two

45-minute sessions per week for each of the 6 years that make up this stage.

#### 4.2. Instrument

A questionnaire was used to collect the information, as in other studies intended to establish the musical training of primary school teachers (Russell-Bowie, 2009; Yim *et al.*, 2007).

This questionnaire comprises 14 items that measure students' degree of assimilation of the music content they will have to teach the primary school children in accordance with the established curriculum (LOE, 2006; LOMCE, 2013). A final question is also included in which the students had to evaluate, on a scale of 0 to 10, their perception of the level of musical knowledge they have attained.

The participants had to respond to the statements made in accordance with a 5-point Likert scale, in which 1 meant not at all and 5 meant a lot. Therefore, the items that compose the questionnaire were drawn up in accordance with the content contained in the music education curriculum in primary education, which is organised in three large content blocks:

- Listening: listening to different types of music, analysis of their constituent elements, expressing ideas, emotions, and feelings through music and musical language, or through other artistic expressions. Teachers work with the pupils on developing abilities in sensory, auditory, and physical recognition that facilitate their understanding of the different artistic expressions.

- Musical performance: musical works, creation and improvisation of different musical productions. The aim here is to develop individual and collective creativity in pupils and ensure they experience aesthetic pleasure, playing a leading role in creating their works. In this process, as well as musical instruments, information and communication technologies are used. Finally, cooperative work is encouraged to value, understand, reflect, and favour creativity.

- Music, movement, and dance: rhythmic movement, choreography, physical expression with musical elements, dramatic play, expressing feelings and emotions with the body, symbolic play, etc.

Next, and to be able to determine the psychometric properties of the instrument, the content validity of the questionnaire was measured. Six specialists from the field of musical education participated in this process, making a series of appraisals and suggestions that were included in the final preparation of the instrument. The construct validity was also calculated using factor analysis, which had previously been submitted to the Bartlett and Kaiser-Meyer-Olkin tests to ascertain whether the results obtained matched a factor analysis model, returning a value of .923 (Bartlett's sphericity test  $\chi^2 = 2321.079$ ,  $p < .001$ ), a figure considerably greater than .6, which indicated that performing this type of analysis is valid (Estévez & Pérez, 2007). Therefore, a factor analysis was performed using the principal component extraction method with varimax rotation, by which 3 factors

were extracted explaining 65.62% of the total variance. The first factor, named *Curriculum-Teaching*, grouped items 2, 6, 7, 8, 9, 10, 11, 12, 13, and 14; factor 2,

*Vocal and physical expression*, comprised items 4 and 5; while items 3 and 1 comprised the *Perception and expression of musical language* factor (see Table 2).

TABLE 2. Results of the factor analysis, using the varimax rotation method.

Items	Component		
	1	2	3
<b>10. Using teaching resources and musical materials appropriate to the educational stage</b>	.829		
<b>14. Using musical resources that can function as teaching strategies in non-musical lessons</b>	.766		
<b>11. Developing basic skills through music</b>	.718		
<b>6. Dramatization with music</b>	.679		
<b>13. Relating music to other curriculum areas, interdisciplinarity</b>	.666		
<b>9. Performing with school musical instruments</b>	.651		
<b>2. Expressing what is perceived through expression through plastic arts, narrative, feelings</b>	.639		
<b>7. Hearing, musical listening</b>	.627		
<b>8. Musical improvisation and creation</b>	.623		
<b>12. Planning group musical activities as a way of encouraging cooperative work, individual work, peer interaction, and independent learning</b>	.606		
<b>4. Singing</b>		.807	
<b>5. Movement and dance</b>		.782	
<b>3. Musical language</b>			.855
<b>1. Perception and expression of basic elements of music</b>			.717

Source: Own elaboration.

To measure the internal consistency of the questionnaire, Cronbach's  $\alpha$  coefficient was calculated, giving a value of .922 indicating a high degree of inter-

nal consistency, given that, according to Kerlinger and Lee (2008), the instruments used in educational research are located between .65 and .85.

### 4.3. Procedure

The students answered the questionnaires in face-to-face surveys, as this was shown to be the most effective data collection strategy (Cea, 2012). This process was carried out during the 2013-2014 academic year, after the students had completed their music modules. So, the students from the Universidad de Alcalá answered the questionnaire in January 2014, while those from the Complutense University and the Universidad Autónoma answered it in May of that year.

### 5. Results

The information from this research was analysed using the IBM SPSS Statistics 20 program, and the results are presented grouped according to the objectives established in this study.

Initially, an analysis of the descriptive statistics was performed of the factors in which the items from the questionnaire were grouped, the results of which are shown in Table 3.

TABLE 3. Descriptive statistics of the factors analysed.

FACTOR	N	Minimum	Maximum	Mean	Standard deviation
Curriculum-teaching	301	1.00	5.00	3.12	.823
Vocal and physical expression	301	1.00	5.00	2.91	.958
Perception and expression of musical language	301	1.00	5.00	3.14	.919

Note: 1 = not at all; 2 = not really; 3 = a bit; 4 = somewhat; 5 = very much

Source: Own elaboration.

The results shown in Table 2 indicate that the students have assimilated the content relating to the *Curriculum-Teaching* factor ( $M = 3.12$ ), *Vocal and physical expression* ( $M = 2.91$ ), and *Perception and*

*expression of musical language* ( $M = 3.14$ ) a bit.

Next, a variance analysis of the factors studied by university variable was performed (see Table 4).

TABLE 4. Variance analysis of the factors by university variable.

Factor	University	Mean	Standard deviation	F	P	Eta <sup>2</sup>	Post hoc comparisons
Curriculum-teaching	U.1 (1)	3.56	.73	30.707	.000***	.171	1,2>3
	U.2 (2)	3.05	.63				
	U.3 (3)	2.74	.87				
Vocal and physical expression	U.1	3.52	.87	49.408	.000***	.249	1,2>3
	U.2	2.87	.66				
	U.3	2.36	.94				
Perception and expression of musical language	U.1	3.41	.73	44.045	.000***	.228	2,1>3
	U.2	3.49	.87				
	U.3	2.53	.83				

\*\*\* $p < .001$ .

Source: Own elaboration.

As can be seen in Table 4, the results were statistically significant for all of the factors analysed. Consequently, in the *Curriculum-teaching* factor, the students from universities 1 and 2 rate this aspect higher than those from university 3. With regards to the degree of assimilation of the *Vocal and physical expression* factor, the students from universities 1 and 2 obtain a higher score than those from num-

ber 3. In the *Perception and expression of musical language* factor, the participants from universities 2 and 1 report a greater assimilation of the content of this factor than those from university 3.

In the last item on the questionnaire, the students were asked to give an overall rating, on a scale of 0 to 10, of the musical knowledge they had learnt once they had finished the module (see Table 5).

TABLE 5. Descriptive statistics of the overall rating for music training.

	Minimum	Maximum	Mean	Standard deviation
Overall rating of music training	1	10	6.72	1.77

Source: Own elaboration.

Table 5 shows that the students gave an average rating of 6.72 to the musical

knowledge they had acquired during their university training.

Next, a variance analysis was performed in accordance with the university variable (see Table 6).

TABLE 6. Variance analysis of the overall rating for music training by university variable.

Factor	University	Mean	Standard deviation	F	P	Eta <sup>2</sup>	Post hoc comparisons
Overall evaluation of their musical training	U.1(1)	7.79	1.13	39.400	.000***	.209	1,2>3
	U.2(2)	6.52	1.24				
	U.3(3)	5.85	2.16				

\*\*\* $p < .001$ .

Source: Own elaboration.

The results shown in Table 6 were statistically significant, showing that the students from universities 1 and 2 rate the musical knowledge acquired through their training more highly than the students from university 3 did.

Finally, a Pearson correlation analysis among the ratings given by the students to the different factors of the questionnaire was performed, the results of which are shown in Table 7.

TABLE 7. Pearson correlation analysis.

	Curriculum-teaching	Vocal and physical expression
Vocal and physical expression	.748***	
Perception and expression of musical language	.518***	.534***

\*\*\* $p < .001$ .

Source: Own elaboration.

According to Salkind (1999), a strong correlation can be seen (if  $r$  is between .6 and .8) between the *Curriculum-teaching*

and *Vocal and physical expression* factors ( $r = .748$ ,  $p = .000$ ). On the other hand, a moderate correlation (if  $r$  is between

.4 and .6) can be observed between the *Curriculum-Teaching* and *Perception and expression of musical language* factors ( $r = .518, p = .000$ ), as well as between *Vocal and physical expression* and *Perception and expression of musical language* ( $r = .534, p = .000$ ).

## 6. Conclusions

This research has focused on establishing what musical training is received by generalist teachers during their studies in three public universities in the Community of Madrid.

Consequently, the first objective specifically attempted to establish the degree of assimilation of the music content that, the future teachers must subsequently teach in the primary school classroom. The results obtained indicated that the students had learnt *a bit* of the content relating to the *Curriculum-teaching*, *Vocal and physical expression*, and *Perception and expression of musical language* emergent factors. This situation is clearly insufficient for tackling the teaching of the subject within certain margins of effectiveness, and furthermore, can create a lack of confidence in the performance of the future teachers, with them even avoiding teaching this subject at school (Holden & Button 2006; Rohwer & Svec, 2014; Watt, 2000). Specifically, the students give a lower score to the factor that includes singing and dance, something which shows that the pupils encounter greater difficulties when carrying out classroom activities for working on vocal and physical expression, even when the curriculum provides for covering these

content areas (Cámara, 2005; Royal Decree 126/2014). However, these same graduates state that with regards to the perception and expression of musical language and the aspects referring to the curriculum and their classroom implementation, they acquired slightly more. This piece of data also shows that despite the short training period available, their level of musical competence increased in some cases.

Regarding the differences in training according to the universities where the participants in this research studied, the second proposed objective, it is necessary to note that universities 1 and 2 show the best results in all the factors analysed, namely *Curriculum-teaching*, *Vocal and physical expression*, and *Perception and expression of musical language*. These include: developing content relating to dramatization, improvisation, and musical composition; performance with school instruments; movement and dance; musical perception and expression; cooperative work through music; and singing, among other types of content that comprise the basic foundations on which the area of music in primary school is based (Conway, Eros, Pellegrino, & West 2010; Hennessy, 2009; Hourigan & Scheib 2009; Phillips, 2003; West, 2014). Furthermore, it is also necessary to consider the use of musical strategies that are useful for non-musical learning, as well as evaluating the interdisciplinary treatment of music in its relationship with the other subjects (Pellegrino, 2011).

Nonetheless, the results obtained indicate that it is vital to increase the train-

ing period to encourage an improvement in the learning of the module to help future primary school teachers in their music teaching (Russell-Bowie, 2009). This is because, while it has been shown that there are centres that give a greater teaching load to music teaching, as is the case of university 2 where the module lasts for the whole year, this does not lead to a greater level of knowledge for the students, who only attain better results in the Perception and expression of musical language factor. This reveals that there is a wide methodological range applied to the subject in each of the centres (Cain, 2007; Golombek & Doran, 2014; Strand, 2006), as can be seen in the means obtained. This circumstance also indicates that it is necessary to unify the criteria on the content imparted, so that the students learn all of the basic aspects that must be covered in primary school music teaching, and these are imparted in the same way in all educational centres.

Finally, in relation to the third objective of this work, the results obtained revealed that the overall rating the students give to the musical knowledge they acquired is a pass mark. These results underline the need to go into greater depth in music teaching to increase the students' theoretical knowledge and at the same time develop their teaching strategies to foster the proper discharge of their teaching activity in their future teaching practice (Yim *et al.*, 2007).

As for the results obtained in the Pearson correlation analysis, the relationship existing between the factors analysed was confirmed, emphasising the importance of studying all of them during the

music training for students on the primary education degree, while at the same time serving to reaffirm the arguments put forth in the previous paragraph. Furthermore, the highest level of correlation corresponds to the *Curriculum-teaching* and Perception and expression of musical language factors, something that might coincide with the content that is most accessible to the students.

Ultimately, this piece of work focusses on the music training received by the future generalist teachers who participated in this study, for them to teach the content of the primary school music curriculum, and it concludes that music training must be increased for all of the factors analysed. Having reached this point, it is also necessary to ask what music training generalist teachers should have and, in the Spanish context, reflect on the role that specialists must adopt. Whatever the response, it would be highly advisable to offer specialisation courses to complete the music training of future primary school teachers, through which a quality musical education can be guaranteed that helps primary school children to approach and enjoy music.

## References

- Adessi, A. R. & Carugati, F. (2010). Social representations of the 'musical child': an empirical investigation on implicit music knowledge in higher teacher education. *Music Education Research*, 12 (3), 311-330.
- Aróstegui, J. L. (2006). La Formación del Profesorado en Educación Musical ante la Convergencia Europea en Enseñanzas Universitarias. *Revista de Educación*, 341, 829-844.

- Biasutti, M. (2010). Investigating trainee music teachers' beliefs on musical abilities and learning: a quantitative study. *Music Education Research*, 12 (1), 47-69.
- Cain, T. (2007). Mentoring trainee music teachers: beyond apprenticeship or reflection. *British Journal of Music Education*, 24 (3), 281-294.
- Cámara, A. (2005). Actitudes de los niños y las niñas hacia el canto. *Musiker*, 14, 101-119.
- Casals, A. & Viladot, L. (2010). Maestros de música y maestros generalistas frente a un material interdisciplinar: ¿más sabe el diablo por viejo que por diablo! *LEEME*, 25, 26-48.
- Cea, M. A. (2012). *Metodología cuantitativa: Fundamentos e innovaciones*. Madrid: Síntesis.
- Cevik, B. (2011). Personality self-perceptions of Turkish music pre-service teachers in relation to department satisfaction. *International Journal of Music Education*, 29 (3), 212-218.
- Conway, C. M., Eros, J., Pellegrino, K., & West, C. (2010). Instrumental Music Education Student's Perceptions of Tensions Experienced during their Undergraduate Degree. *Journal of Research in Music Education*, 58 (3), 260-275.
- Crow, B. (2008). Changing conceptions of educational creativity: a study of student teachers' experience of musical creativity. *Music Education Research*, 10 (3), 373-388.
- De Vries, P. (2013). Generalist teachers' self-efficacy in primary school music teaching. *Music Education Research*, 15 (4), 375-391.
- Estévez, J. F., & Pérez, M. J. (2007). *Sistema de indicadores para el diagnóstico y seguimiento de la educación superior en México*. México: ANUIES.
- García-Gil, D., & Ríos-Vallejo, P. (2013). Estereotipos femeninos en creaciones narrativas musicales. *Música y educación: Revista trimestral de pedagogía musical*, 96, 92-107.
- Georgii-Hemming, E. & Westvall, M. (2010). Teaching music in our time: student music teachers' reflections on music education, teacher education and becoming a teacher. *Music Education Research*, 12 (4), 353-367.
- Golombek, P. & Doran, M. (2014). Unifying cognition, emotion, and activity in language teacher professional development. *Teaching and Teacher Education*, 39, 102-111.
- Hallam, S., Burnard, P., Robertson, A., Sale, C., Davies, V., Rogers, L., & Kokatsaki, D. (2009). Trainee primary-school teachers' perceptions of their effectiveness in teaching music. *Music Education Research*, 11 (2), 221-240.
- Hennessy, S. (2009). Creativity in the music curriculum. En A. Wilson (Ed.), *Creativity in Primary Education* (pp. 134-147). Exeter, UK: Learning Matters.
- Holden, H. & Button, S. H. (2006). The teaching of music in the primary school by the non-music specialist. *British Journal of Music Education*, 23 (1), 23-38.
- Hourigan, R. M. & Scheib, J. (2009). Inside and Outside the Undergraduate Music Education Curriculum: Student Teacher Perceptions of the value of Skills, Abilities and Understandings. *Journal of Music Teacher Education*, 18, 48-61.
- Howe, M. J. A., Davidson, M. J., & Sloboda, J. A. (1998). Innate talents: reality or myth? *Behavioral and Brain Sciences*, 21 (3), 399-407.
- Jeanneret, N. & Degraffenreid, G. M. (2012). Music education in the generalist classroom. En G. E. McPherson y G. F. Welch (Eds.), *The Oxford Handbook of Music Education* (pp. 399-416). Oxford, UK: Oxford Handbook in Music.
- Kerlinger, F. N. & Lee, H. B. (2008). *Investigación del comportamiento. Métodos de investigación en Ciencias Sociales*. México: McGraw-Hill Interamericana.
- Lamont, A. (2011). The beat goes on: music education, identity and lifelong learning. *Music Education Research*, 13 (4), 369-388.

- Ley Orgánica 2/2006, de 3 de mayo, de Educación (BOE n.º 106, 04 de mayo de 2006).
- Ley Orgánica 8/2013, de 9 de diciembre, para la mejora de la calidad educativa (BOE n.º 295 de 9 de diciembre de 2013).
- Muruamendiaraz, N., Ordoñana, J. A., & Goldaracena, A. (2010). La formación del profesorado de Música en Primaria en Francia e Italia. *Profesorado. Revista de currículum y formación del profesorado*, 14 (2), 83-93.
- Orden ECI/3857/2007, por el que se establecen los requisitos para la verificación de los títulos universitarios oficiales que habiliten para el ejercicio de la profesión de Maestro en Educación Primaria (BOE de 27 de diciembre de 2007).
- Ortiz, H. J. (2004). Situación actual de la educación musical y artística en la formación del profesorado de la UPNA. *Revista de Psicodáctica*, 17, 57-64.
- Pellegrino, K. (2011). Exploring the Benefits of Music-Making as Professional Development for Music Teacher. *Arts Education Policy Review*, 112 (2), 79-88.
- Phillips, K. H. (2003). Creating a safe environment for singing. *Choral Journal*, 43, 41-43.
- Pozo, C. & Bretones, B. (2015). Dificultades y retos en la implantación de los títulos de grado en las universidades españolas. *Revista de Educación*, 367, 147-172.
- Real Decreto 1440/1991, por el que se establece el título universitario, oficial de Maestro, en sus diversas especialidades y las directrices generales propias de los planes de estudios conducentes a su obtención (BOE de 11 de octubre de 1991).
- Real Decreto 1393/2007, por el que se establece la ordenación de las enseñanzas universitarias oficiales (BOE de 30 de octubre de 2007).
- Real Decreto 1594/2011, por el que se establecen las especialidades docentes del Cuerpo de Maestros que desempeñen sus funciones en las etapas de Educación Infantil y de Educación Primaria reguladas en la Ley Orgánica 2/2006, de 3 de mayo, de Educación (BOE de 9 de noviembre de 2011).
- Real Decreto 126/2014, por el que se establece el currículo básico de la Educación Primaria (BOE de 1 de marzo de 2014).
- Roche, E. M. (1994). La enseñanza de la música en el marco de la LOGSE. *Aula de Innovación Educativa*, 24, 5-8.
- Rohwer, D. & Svec, C. (2014). Perceived Value of Research Preparation Opportunities for Future Music Education Professors. *Update: Applications of Research in Music Education*, 33 (1), 57-64.
- Russell-Bowie, D. (2009). What me? Teach music to my primary class? Challenges to teaching music in primary schools in five countries. *Music Education Research*, 11 (1), 23-36.
- Salkind, N. J. (1999). *Métodos de investigación*. México: Prentice Hall.
- Sebastián, A. (2006). *La presencia de estereotipos de género en el sistema educativo como determinante del desarrollo personal y profesional (Estudio descriptivo)*. Madrid: Ministerio de Trabajo y Asuntos Sociales. Instituto de la Mujer.
- Seddon, F. & Biasutti, M. (2008). Non-music specialist primary school teachers' confidence in teaching music in the classroom. *Music Education Research*, 10 (3), 403-421.
- Serrano, J. A., Lera, A. y Contreras, O. (2007). Maestros generalista vs especialistas. Claves y discrepancias en la reforma de la formación inicial de los maestros de primaria. *Revista de Educación*, 344, 533-555.
- Strand, K. (2006). Learning to Inquire: Teacher Research in Undergraduate Teacher Training. *Journal of Music Teacher Education*, 15, 29-42.
- Watt, H. (2000). *The teaching of music in the primary school by the non-specialist*. Unpublished doctoral dissertation, University of

- Durham, United Kindom. Retrieved from [http://etheses.dur.ac.uk/4196/1/4196\\_1715.pdf?UkUDh:CyT](http://etheses.dur.ac.uk/4196/1/4196_1715.pdf?UkUDh:CyT) (2017-01-25).
- West, C. (2014). First-Generation Mixed Methods Designs in Music Education Research: Establishing an Initial Schematic. *Bulletin of the Council for Research in Music Education*, 199, 53-67.
- Yim, H. Y. B., Abd-El-Fattah, S., & Lee, L. W. M. (2007). A Rasch Analysis of the Teachers Music Confidence Scale. *International Education Journal*, 8 (2), 260-269.