

Musical creativity in Early Childhood Education: analysis of textbook activities

Gregorio Vicente-Nicolás¹; Judith Sánchez-Marroquí²

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Abstract. The main aim of this study is to analyse the activities for promoting musical creativity included in Early Childhood Education projects. The sample consisted of 2200 musical activities included in the textbook educational projects (textbooks) for the 2nd cycle of Early Childhood Education (ages 3-6 years) most commonly used in the Region of Murcia schools. For data collection, an ad hoc instrument was designed called the Protocol for the Systematic Analysis of Musical Activities in Early Childhood Education, which included the following sections: (I) data on the Educational Project; (II) activity identification data; (III) activity planning and contents; (IV) levels of musical creativity, established from an adaptation of the 4C creativity model by Kaufman. The information obtained was subjected to descriptive and inferential analysis (Chi-square, Spearman's correlation, Cronbach's alpha, Mann-Whitney U and Kruskal-Wallis). The results revealed that only one out of five musical activities was creative. One positive note is that the most commercially successful textbooks were also those that included the most creative activities. However, it was also observed that these were less present in the most current projects, while there were more creative activities in earlier editions. Regarding the musical areas focusing more on creativity, movement/dance and listening stood out as those that incorporated more creative proposals. Finally, only 2% of the musical activities included technological resources to promote creativity, in spite of the importance of this type of resource.

Keywords: Creativity; Early Childhood Education; music education; educational project; textbook.

Summary. 1. Introduction. 2. Method. 3. Results. 4. Discussion and conclusions. 5. References.

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1. Introduction

Neuroscientific research confirms that 'being musically creative' (improvising, composing, songwriting, etc.) depends on a variety of mechanisms and network interactions (executive functions, motor planning, limbic areas, among others) that enable and motivate the musician to create original music (Bashwiler et al., 2020). Performing musical activities causes changes in the brains of school-age children, furthermore improving their executive functions (Chen et al., 2022; Habibi et al., 2018). For some authors, musical creativity can best be developed if conceived as socio-cultural learning which takes advantage of environmental opportunities and promotes collaborative experiences (Biasutti, 2015; Corcoran, 2021; Keller & Lazzarini, 2017; Muhonen, 2016; Veloso, 2017).

According to Zioga et al. (2020), there is a positive correlation between musical experience and creativity. Therefore, the more students engage in musical learning, the more creative they become, and conversely, fewer and less varied learning opportunities may reduce their musical creativity. Moreover, musical experiences can increase creativity in other areas (Lau & Grieshaber, 2018), as found in Cuadrado's (2019) study in which 6- and 7-year-old students improved non-musical originality after 14 weeks of performing rhythmic and melodic creations for one hour per week.

As for the process of musical creativity in childhood, Schiavio and Benedek (2020) state that it begins with children's natural curiosity towards the sounds around them and consciously evolves into a progressive organisation of

¹ University of Murcia (Spain)
E-mail: gvicente@um.es
ORCID: <https://orcid.org/0000-0001-6882-6157>

² University of Murcia (Spain)
E-mail: jsm12@um.es
ORCID: <https://orcid.org/0000-0002-9524-8986>

their sound discoveries. In this regard, Schiavio et al. (2017) describe musical development in childhood as a circular interaction between perception and action characterised by three phases. The first is *Exploration*, where infants explore the environment with spontaneous actions such as shaking a rattle and enjoying the movement. The second is *Original Teleomusical Acts* (OTAs), which are basic activities with sound goals such as tapping a drumstick to produce different sounds, rather than movement goals as in the previous phase. The performance of these musical activities begins at 6 months and is transformed into *Constituted Teleomusical Acts* (CTAs) during the first two years and constitute the third phase proposed by the authors. CTAs are activities with sound objectives involving a more complex level of musical creation such as composition, improvisation, collaboration with peers, etc.

Regarding types or levels of musical creativity, Wiggins' (2012) ideas are worth mentioning, as they indicate that spontaneous creativity precedes conscious creativity. The former is so-called 'inspiration', which occurs spontaneously, but without conscious will; "it is the basis of musical composition: an idea appears in consciousness without warning and without any indication of its source" (Wiggins, 2012, p. 306). However, conscious creativity is done with an aim and is a problem solving activity of a different nature, e.g. asking the musician to reduce the number of instruments in an orchestral musical performance. According to this author, spontaneous creativity is prior to consciousness and, thus, being creative is a human characteristic. When a child's spontaneous musical expression is encouraged, this contributes to the creative process, considered as an autotelic activity, i.e. it focuses on the creative act itself and not on the result of creation (Susic, 2018).

It is pertinent to recall the levels of creativity established by Kaufman et al. (2016) based on the 4C model (*mini-c*, *little-c*, *Pro-C*, *Big-C*), even though this is not specific to musical activity. *Mini-c* or personal creativity is subjective self-discovery, i.e. activities which are meaningful to students. Each learner enjoys the process of experimenting without needing others to assess their creativity, however with appropriate feedback they can become *little-c* input. The *little-c* level refers to everyday creativity, i.e. creations made by all which others recognise as creative. Conscious practice at this level is key to progressing towards professional creativity. The *Pro-C* level is expert-level creativity coming from years of practice, and with time the essential factor in reaching the latter level. Finally, the *Big-C* level is typical genius creativity, great contributions remembered for generations.

As for how or from which areas musical creativity can be fostered, Hargreaves (2012) considers listening as a key to musical creativity, since it develops the imagination, which is the cognitive basis of musical perception and production. However, this author states that creative activities through musical listening have been neglected, there being greater emphasis on other activities. Also related to listening, Ritter and Ferguson (2017) find that simply listening to 'happy music' (classical music causing a positive mood), while doing any other activity increases creative thinking.

Other authors believe that musical imagination and creativity are best developed through the body and movement (Coste et al., 2019; Vass, 2019), since activities involving movement promote creative thinking (Fritz et al., 2020; Zhou et al., 2017) and can improve performance of executive functions (Bugos & DeMarie, 2017). Creative dance helps students to cooperate and communicate with peers, while offering them rich social experiences (Theocharidou et al., 2018) and is indeed a suitable activity to promote the development of executive functions in primary school students (Rudd et al., 2021). In this regard, Malinin (2019) indicates that the body influences cognitive processes and that, from the 4E cognitive approach (embodiment, embedded, enactive, extended), the mind is not only in the brain, but also in the body and in the situation of the body in its context.

Some techniques for developing musical creativity focus on singing, since like dance it arises directly from the body. The voice, in combination with whole body movement, is a powerful form of expression (Mainsbridge, 2018). Ilari et al. (2018) note that the abilities to improvise endings in songs and to match pitches increase with age. Strategies which students use to improvise do not depend on the musical training received, but on their skills, interests and familiarity with activities. Other authors such as Treger (2020) highlight that musical creativity can also be developed through playing an instrument, since it is directly related to attitudes of curiosity, disposition to experiential learning and a yearning for knowledge. Another technique that can enhance creativity in musical composition is the mental visualization of images and sounds proposed by Wong and Lim (2017), who found that children aged 3 to 5 years could very easily imagine moving animals and their sounds, and that children aged 5 to 8 years could transform their visual and auditory mental images (animal movements and sounds) into musical symbols, creating a more creative product than when not using mental images.

Considering content and techniques that develop creativity, it should be remembered that musical activities help students develop a positive self-image and that they are more creative when they feel self-confident and secure in their musical abilities due to the correlation between musical creativity and self-concept (Coulson & Burke, 2013; Mawang et al. 2019). Furthermore, participation in a musically creative space improves classroom atmosphere, individual and collective motivation and positive emotions (Cremades-Andreu & Lage Gómez, 2018).

As regards teacher training, according to Peñalba et al. (2021), three dimensions are involved in children's musical creativity: teaching decisions, classroom materials and resources and each child's creative potential. It should be noted that early childhood teachers' and pupils' perceptions and attitudes towards musical play do not always coincide (Koutsoupidou, 2020). Pupils are often forced to play in ways that are far removed from the objectives of free play, the satisfaction of personal needs or creativity. In this respect, several authors claim that teachers who promote musical freedom and improvisation stimulate students' creative thinking (Navarro Ramón & Chacón-López, 2021;

Nazario, 2022). For Bolduc and Edvrad (2017) more experienced early childhood teachers perform and use more creative musical activities than those with less experience.

Both teacher training in the development of musical creativity and its presence in the curriculum at this stage should be considered. Royal Decree 1630/2006 (in effect during the study), establishes minimum teaching requirements for the second cycle of Early Childhood Education (ages 3-6), and only refers explicitly to creativity on five occasions. Artistic language (*Area of Languages: Communication and representation*) refers to the exploration of the sound possibilities of the voice the body, everyday objects and musical instruments, along with use of sounds for musical interpretation and creation (Royal Decree 1630/2006, p.481). In contrast, in the new regulations for this stage (Royal Decree 95/2022), references to creativity are more frequent (29 times) and even two key competences related to it are included: *Entrepreneurial competence* fostering imagination, strategic and creative thinking, and *Competence in cultural awareness and expression* aiming to foster creative expression through different languages and artistic forms. Likewise, creativity continues to be developed through the specific competences of *Area 3. Communication and Representation of Reality*, the evaluation criteria and basic knowledge (e.g. “Sounds, expressive and creative possibilities of the voice, the body, everyday objects in the surroundings and instruments”. Royal Decree 95/2022, p.32).

In terms of resources, Calavia et al. (2021) point out the need to incorporate materials and resources in schools to encourage pupils’ creative thinking. In this regard, Area Moreira (2017) states that traditional teaching materials such as textbooks enable students to learn more receptively compared to digital teaching materials that promote new experiences between teachers and students based on active learning. The reality in classrooms is that the omnipresence of the textbook remains, while teachers’ perceptions indicate that the use of ICT does not reduce the role of the textbook, and neither will ICT lead to the disappearance of textbooks (Rodríguez Rodríguez & Martínez Bonafé, 2016, p. 320). Early Childhood teachers often use the textbook as a starting point for the exploration of musical resources and thereby create adaptations that relate to the rest of classroom learning (Barrett et al., 2022). In a study by Alonso Vera and Vicente Nicolás (2019), secondary school music teachers believed that not using a textbook allowed for greater freedom and flexibility, the creation of their own resources and the incorporation of ICT into music teaching. Different authors claim that digital music resources can develop musical creativity (Addressi, 2020; Cremata & Powell, 2017; Dobson & Littleton, 2016; Macrides & Angeli, 2020; Nikolaidou, 2012; Palazón-Herrera, 2021). However, in a study by Huovinen and Rautanen (2020) with children aged 10-12 years which compared creative processes with tablets and instruments, the group using tablets was less creative than that which actually played with musical instruments. It can be concluded, as Davies et al. (2013) point out, that a wide range of materials, tools and resources can stimulate creativity in the classroom, from manipulative materials to the use of technological resources. In fact, according to Barrett et al. (2022), one of the *good practices* that can be performed in the area of music in Early Childhood Education is to offer pupils a variety of opportunities and the free and open use of materials in order to express themselves creatively through music and dance.

The need to work on creativity in early childhood classrooms, the influence of music on its development, the importance of selecting appropriate materials and the use of the textbook as the main resource at this stage all justify this study’s questions.

- Are the musical creative activities proposed in Early Childhood Education textbooks sufficient?
- Do publishers offer different levels of musical creativity in planned activities?
- Through which content areas (singing, playing instruments, listening, movement/dance and musical language) is musical creativity worked on?
- Do textbooks include technological resources to carry out creative musical activities?

Based on these questions, the main objective of this study is to determine which type of creative musical activities contained in Early Childhood Education textbooks are effective.

2. Method

2.1. Sample

As previously mentioned the aim of this study is the analysis of creative musical activities included in) Early Childhood Education textbooks (TBs) in Spain. It would have been preferable to take into account the most widely used TBs in the entire country, but given the impossibility of consulting the approximately 19,000 centres where such teaching takes place, the study was limited to a single autonomous community, the Region of Murcia, chosen in this case due to proximity and convenience. It should be noted that the most widely used TBs in this region coincided with those that hold the top positions in the ranking of non-university textbook sales by publishers in Spain (Beas Miranda & González García, 2019), suggesting that data obtained would be quite similar to that of other regions. In Early Childhood Education, unlike other educational stages, TBs content are not adapted to each autonomous community, but are the same for the whole of Spain.

The study population was analysed for all musical activities included in TBs for Early Childhood Education used in schools of the Region of Murcia during the 2017/2018 academic year. Of 497 schools, 298 (60%) used books, while the remaining 40% preferred other types of methodologies, such as Project Based Learning (PBL) or materials made by the school/learning center. To determine sample size, a confidence level of $\alpha = .01$ and margin of error of 2% was established, resulting in $n = 275$, representing 92.3% of schools using textbooks. To obtain this number, the top eight textbooks were selected from the ranking of most used in the region (Table 1). These belonged to four different publishers (PH1: Edelvives, PH2: Santillana, PH3: Anaya and PH4: SM), with the peculiarity that each had both a new and old edition which were used in the classroom. The final study sample comprised the 2,200 musical activities from the top ranking eight textbooks.

Table 1. Ranking of Textbooks comprising the sample.

Textbook	Publishing House	Edition year	Schools (F)
TB1	Edelvives	2016	70
TB2	Santillana	2016	52
TB3	Anaya	2014	51
TB4	SM	2016	32
TB5	Edelvives	2012	29
TB6	Santillana	2012	23
TB7	SM	2013	11
TB8	Anaya	2017	7
		Total	275

Note. TB: Textbook; PH: Publishing House

2.2. Instruments

For data collection, an *ad hoc* instrument was designed called *Protocol for the Systematic Analysis of Musical Activities in Early Childhood Education*, which included the following sections³: (I) Textbook data; (II) activity identification data; (III) activity planning and contents; (IV) levels of musical creativity. The variables of each section are presented below:

I. Textbook data:

1. Title.
2. Publisher.
3. Year of edition (new or old version).
4. Position in ranking of most used TBs.

II. Data identifying the activity:

5. Course/Quarter/Unit/Page.
6. Title of activity.
7. Description of activity.

III. Planning of activity and contents:

8. Type of activity: Music Activity (MA), which has a purely musical purpose; or Activities with music as a Resource (AR), an activity from other areas that uses music as a medium or resource.
9. Number of content areas worked on in activity.
10. Content areas: (1) *Singing* or games for vocal development; (2) *Playing instruments*, musical activities with body percussion or instruments; (3) *Listening*, active listening to musical works; (4) *Movement/dance*, movement games, choreographic exercises or dances; and (5) *Musical language*, exercises in auditory discrimination and understanding of the elements of sound and music.

IV. Levels of musical creativity (adapted from the 4C creativity model of Kaufman et al., 2016):

11. Level of creativity: (1) *no creativity*: activities that do not develop creativity; (2) *mini-c* or personal creativity: musical creations by students for their own enjoyment, but without the need to be valued as creative

³ In addition to sections indicated above, the protocol includes other sections dealing with Sound qualities and its methodological phases, resources used by activity, as well as musical mistakes made. Results of these sections are not included in this paper.

by others, such as free dancing, free playing of instruments or free body percussion, free performance/expression of an audition (drawing in the air or with the body); and (3) *little-c* or everyday creativity: musical activities performed by students and considered creative by all, such as inventing a choreography together, creating a composition with body percussion or musical instruments, changing the lyrics of a song to create a new one, among others.

The instrument was subjected to an evaluation process in order to meet scientific criteria. In the first version of the instrument, content validity was studied and an excellent level of agreement was obtained, both intra-rater ($K = .92$) and inter-rater ($K = .85$). In addition, the instrument was subjected to expert judgement through the construction of a validation scale and resulted in very high validity ($M = 3.8$), according to the measurement scale used (1: very low, 2: low, 3: moderate and 4: very high). The instrument obtained content validity in terms of inter-judge agreement ($W = .65$) with moderate intensity. A second version of the instrument was subsequently developed and reliability was calculated with a representative sample ($\alpha = .75$). Last of all, the final version was established and its reliability was increased in the total sample ($\alpha = .82$), resulting in good internal consistency.

2.3. Procedure

Websites from all schools in the region were consulted in order to obtain the ranking of the most used textbooks. When information was unavailable or when doubts existed regarding updating of these websites, the school board was contacted personally by e-mail or by telephone. Once ranking of the most widely used Early Childhood Education TBs in the Region of Murcia had been established, those necessary to reach the required sample size were selected. Finally, the systematic analysis protocol was applied to all musical activities included in the selected textbooks and results were interpreted.

2.4. Data analysis

An initial exploratory analysis was conducted for a description of variables (frequencies, mean and percentages) and an advanced descriptive analysis for testing the parametric assumptions (Kolmogorov-Smirnov and Levene). In addition, inferential analysis was done to study relationships between different variables (Chi-square, Spearman's correlation and Cronbach's alpha), to compare two or more groups with respect to a variable (Mann-Whitney U and Kruskal-Wallis) and in concordance with several observers regarding the same variable (Cohen's K and Kendall's W). For interpretation of results, a confidence level of 95% was accepted. Data were analysed with SPSS version 24.

3. Results

Firstly, it is noteworthy that of the twenty music activities analysed, (19.7%) were creative, namely 13.6% reflected a *mini-c* level (personal creativity), and 6% being planned activities at the *little-c* level (everyday creativity). According to the distribution of activities by publisher, significant differences were found in musical creativity among the various syllabuses, $\chi^2(3) = 26.896, p < .001$ (Table 2).

Table 2. Level of musical creativity by publishing house.

Publishing House ^a	Level of creativity ^b						Total	
	1		2		3			
	F	%	F	%	F	%	F	%
PH1 (TB1+TB5)	403	75.3	96	17.9	36	6.7	535	100
PH2 (TB2+TB6)	304	75.2	60	14.9	40	9.9	404	100
PH3 (TB3+TB8)	630	84.2	80	10.7	38	5.1	748	100
PH4 (TB4+TB7)	430	83.8	64	12.5	19	3.7	513	100
Total	1767	80.3	300	13.6	133	6.0	2200	100

^a Textbook (TB) belonging to each Publishing House (PH) are indicated in brackets.
^b 1: No creativity; 2: *Mini-c* (Personal creativity); 3: *Little-c* (Everyday creativity).

These differences in musical creativity were also significant in the distribution of the eight TBs, $\chi^2(7) = 91.337, p < .001$, TB3 having the most *mini-c* creativity activities (23.4%) and TB2 included planning for the most *little-c* creativity activities (11.3%). Additionally, a positive relationship was seen between book ranking and creativity activities, $r = .168, p < .001$, indicating that the books used most, actually worked more on creativity. Differences were also observed regarding time of publication, $U(2,200) = 564.135, p = .002$, indicating that the older TBs editions contained more creative activities (22.9%) than the newer ones (17.2%) (Table 3).

Table 3. Level of musical creativity by textbook.

Textbook ^a	Level of creativity ^b						Total	
	1		2		3			
	F	%	F	%	F	%	F	%
TB1 _N	243	76.9	49	15.5	24	7.6	316	100
TB2 _N	153	71.8	36	16.9	24	11.3	213	100
TB3 _O	210	70.2	70	23.4	19	6.4	299	100
TB4 _N	212	80.6	37	14.1	14	5.3	263	100
TB5 _O	160	73.1	47	21.5	12	5.5	219	100
TB6 _O	151	79.1	24	12.6	16	8.4	191	100
TB7 _O	218	87.2	27	10.8	5	2.0	250	100
TB8 _N	420	93.5	10	2.2	19	4.2	449	100
Total	1767	80.3	300	13.6	133	6.0	2200	100

^a _N: new edition; _O: older edition.
^b 1: No creativity; 2: *Mini-c* (Personal creativity); 3: *Little-c* (Everyday creativity).

As for activity type, the results showed there to be a relationship between musical creativity and activity type, $\chi^2(2) = 21.569, p < .001$, with *mini-c* creativity being more present in AR (16.1%) whereas *little-c* creativity was more prevalent in MA (7.6%) (Table 4).

Table 4. Level of musical creativity according to activity type.

Type of activity ^a	Level of creativity ^b						Total	
	1		2		3			
	F	%	F	%	F	%	F	%
MA	1149	80.1	177	12.3	109	7.6	1435	100
AR	618	80.8	123	16.1	24	3.1	765	100
Total	1767	80.3	300	13.6	133	6.0	2200	100

^a AM: Exclusively musical activity; AR: Activity from another area used as a musical resource.
^b 1: No creativity; 2: *Mini-c* (Personal creativity); 3: *Little-c* (Everyday creativity).

As for activity content areas, it should be taken into account that the same activity could develop several contents simultaneously; for example, *singing a song accompanied by instruments* worked on both singing and playing instruments. Movement/dance and listening activities made the most reference to musical creativity (33.4% and 31.1%, respectively), while musical language activities made the least reference (5.6%). *Mini-c* creativity was mostly developed through movement (24.5%) and *little-c* creativity with vocal expression (10.7%). A strong association was seen between movement/dance activities and creativity, $\chi^2(2) = 275.959, p < .001$, as well as between listening activities and creativity, $\chi^2(2) = 160.965, p < .001$. This relationship between content and creativity was also observed in other domains, though with a much lower intensity, as reflected in the Chi-square values (Table 5).

Table 5. Level of musical creativity by content area.

Content areas	Level of creativity ^a						Total		$\chi^2(2)$
	1		2		3				
	F	%	F	%	F	%	F	%	
Singing	489	78.1	70	11.2	67	10.7	626	100	35.788*
Playing instrument	643	83.1	82	10.6	49	6.3	774	100	9.394*
Listening	703	68.9	228	22.3	90	8.8	1021	100	160.965*
Movement/ dance	741	66.6	272	24.5	99	8.9	1112	100	275.959*
Musical language	387	94.4	16	3.9	7	1.7	410	100	63.124*

^a 1: No creativity; 2: *Mini-c* (Personal creativity); 3: *Little-c* (Everyday creativity).
^{*} $p < .01$

Although no significant differences were observed in musical creativity by grades, $\chi^2(2) = 1.909$, $p = .604$, it did reflect a higher level of *mini-c* creativity in preschool level 1(3 year olds) and a higher level of *little-c* creativity in preschool level 3(5 year olds) (Table 6).

Table 6. Level of musical creativity by stage level.

Stage Level	Level of creativity ^a						Total	
	1		2		3		F	%
	F	%	F	%	F	%		
1.º	622	79.1	124	15.8	40	5.1	786	100
2.º	614	8.4	94	12.5	46	6.1	754	100
3.º	531	80.5	82	12.4	47	7.1	660	100
Total	1767	80.3	300	13.6	133	6.0	2200	100

^a 1: No creativity; 2: *Mini-c* (Personal creativity); 3: *Little-c* (Everyday creativity).

Finally, regarding the resources used in creative activities, significant differences were observed, $\chi^2(4) = 22.956$, $p < .001$, with the CD being most used in the *mini-c* and *little-c* creativity activities (Table 7).

Table 7. Level of musical creativity according to resources used.

Resources	Level of creativity ^a						Total	
	1		2		3		F	%
	F	%	F	%	F	%		
None	863	82.4	142	13.6	42	4.0	1047	100
CD	819	77.4	153	14.5	86	8.1	1058	100
Digital game	85	89.5	5	5.3	5	5.3	95	100
Total	1767	80.3	300	13.6	133	6.0	2200	100

^a 1: No creativity; 2: *Mini-c* (Personal creativity); 3: *Little-c* (Everyday creativity).

4. Discussion and conclusions

Creative musical proposals were present in one fifth of the TBs musical activities for Early Childhood Education. Although in musical educational contexts, interpretation and perception are prevalent, there should be a balance between interpretative and creative competences. Given that musical creativity is developed by offering pupils a wide range of creative musical experiences (Cuadrado, 2019; Peñalba et al., 2021), there are few creative musical activities for obtaining the desired results. On the other hand, one positive highlight is that the most used TBs are those that work most on musical creativity. Regardless of whether teachers are aware of this fact or not, it is evidence of good criteria being used for the selection of teaching materials.

It is striking that the most modern educational projects include fewer creative activities than the older ones. Despite the difference being quite low, this being only 5%, it is difficult to understand that the most current musical approaches included in TBs do not reflect the results of numerous studies which advocate a greater presence of musical creativity in the classroom (Koutsoupidou, 2020; Lau & Grieshaber, 2018; Navarro Ramón & Chacón-López, 2021). It would be interesting to carry out an in-depth longitudinal study incorporating the recently published projects to verify whether this is coincidence or there is actually a tendency to incorporate fewer musical creativity activities.

As for distribution of activities per year, it might be said that some publishers in the music programmes reflect the creative process indicated by different authors (Schiavio et al. 2017; Schiavio & Benedek, 2020), characterised by an increase in the degree of difficulty of creative activities depending on the age of students. This study confirms this progression, the number of activities with *mini-c* musical creativity being higher in the lower stage levels, whereas *little-c* creativity increases in the higher levels. Though the number of creative activities at the *little-c* level has increased in recent years, these activities are minimal, being present in only 6% of the total. A wider selection of such creative activities by publishers and, frequent practice of such activities at this level, would be necessary to improve creativity, as Kaufman et al. (2016) point out

A greater presence of *mini-c* musical creativity has also been found in activities in other areas that use music as a medium or resource, while those with an exclusively musical purpose develop more *little-c* creativity. In this regard,

Schiavio et al. (2017) mentioned that activities with sound objectives (*Constituted Teleomusical Acts*) involve a higher level of musical creativity. This fact emphasises the importance of musical planning in Early Childhood Education, since even though music can be an ideal resource for working on a variety of content areas, developing fundamental musical competences in students requires programming musical objectives and contents that unequivocally reflect the idiosyncrasy of this art.

With regard to musical areas in the textbooks that work more on creativity, movement/dance and listening should be highlighted as those that incorporate more creative proposals. In the case of the former, one third of activities were creative, confirming the importance of body movement in the development of creativity as mentioned by several authors (Malinin, 2019; Vass, 2019; Zhou et al., 2017). Likewise, current regulations for this stage emphasise this theoretical assumption, and explicitly allude to the sonorous, expressive, communicative and creative possibilities of the body (Royal Decree 95/2022). As for listening, three out of ten activities in this area included creative elements, indicating that activities involving listening are among those which highly enhance musical creativity. This is contrary to what Hargreaves (2012) argues, since listening should not be excluded in the development of musical creativity. The current infant curriculum does not refer to creativity in listening activities, but rather to musical listening for enjoyment (Royal Decree 95/2022, p. 32). However, in the introduction to the previous legislative document the area of *Languages: communication and representation* does indicate that attentive listening gives rise to some abilities developed by musical language, such as creativity (Royal Decree 1630/2006). Moreover, it should be pointed out that many instrumental, vocal or corporal activities considered creative actually arise from listening to music.

Taking into account that a wide variety of resources and materials are necessary to develop creativity (Barrett et al., 2022; Calavia et al., 2021; Davies et al., 2013), the use of technological resources in educational projects to work on musical creativity is very limited, there being only 2% of activities which specifically incorporate digital resources. This data shows that publishers need more knowledge regarding the influence of digital tools in the development of musical creativity, as highlighted by numerous authors (Addessi, 2020; Cremata & Powell, 2017; Dobson & Littleton, 2016; Macrides & Angeli, 2020; Nikolaidou, 2012; Palazón-Herrera, 2021).

One limitation of this study is the lack of a classification of musical creativity at this stage, which required the adaptation of a theoretical model on creativity not specifically designed for the field of music education. Furthermore, this research has limitations inherent in quantitative methods. It allowed for an objective analysis, capable of measuring certain variables and providing reliable and structured information on musical creativity, but not a comprehensive analysis on this subject which would include other context variables. As for the results obtained, they refer to the publishers' programmes which should indicate the materials most used by teachers. However, these are not contrasted with what is actually used in the classroom. Keeping these limitations in mind, it would be interesting to find out which musically creative activities are carried out in pre-school classrooms by teachers who follow a TB. Furthermore, it must be analysed whether they carry out only TBs proposals or they complement these with other types of activities. Likewise, it would also be necessary to investigate how teachers who do not use a book develop musical creativity, what type of activities they programme and what resources they use. Related to these previous ideas, it would be advisable to analyse pre- and in-service teacher training, as this is essential in promoting creativity in early childhood classrooms, as mentioned by MacGlone et al. (2022). Moreover, many teachers do not consider themselves qualified to perform creative musical activities, due to lack of background, training and experience in the field.

Finally, it would be also be beneficial for this work to encourage publishers and teachers in early childhood education to be more aware of creative musical processes in their programming. As Beghetto and Kaufman (2014) stated, despite creativity often being neglected in schools, it is not something that can be 'killed', as we all have the ability to be creative in our daily experiences. Teachers can incorporate creative activities into their daily routines and make the classroom a truly creative space. Performing songs, dances or instrumental pieces is essential, but creating them is also of utmost importance. There exists a wide range of possibilities, from spontaneous actions and proposals for modification or variations, to the creation of small musical pieces or works by the pupils themselves. Even though the process can be seemingly complicated, only by freely creating in a variety of contexts can pupils feel and become creative.

5. References

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