



Article

Storytelling with Music in Initial Teacher Education: A Comparative Study between Braga (Portugal) and Galicia (Spain)

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Abstract: Although there is an indeterminacy in terminology, we can understand adding sounds and music to children's stories as the relationships created between verbal language (words), music language (sounds or silence), and body language (gestures and movements), that intertwine, strengthening the message intended to be communicated and allowing learning to be addressed in a holistic manner. This quantitative study, of a descriptive nature, aims to identify the previous experiences of student teachers in Galicia and the northern region of Portugal, related to putting sounds to children's stories and the training received in this field during their university studies. The data suggest that creative practices related to storytelling through music or adding sounds to children's stories and/or creating atmospheres in early childhood and primary education, despite providing great benefits, are neither as usual nor as enriching as would be expected, at least in the Spanish context. In relation to initial teacher education, the results are even less encouraging in both contexts, as the majority of students had received training in creating sound stories but stated that they were not satisfied with their experiences, as they did not believe they were trained or had acquired the necessary tools for the integration of this methodological strategy in the school classroom.

Keywords: initial teacher education; interdisciplinary projects; children's stories



Citation: Chao-Fernández, R.; da Silva, S.R.; Gillanders, C. Storytelling with Music in Initial Teacher Education: A Comparative Study between Braga (Portugal) and Galicia (Spain). *Educ. Sci.* **2023**, *13*, 805. <https://doi.org/10.3390/educsci13080805>

Academic Editor: Eila Jeronen

Received: 7 July 2023

Revised: 2 August 2023

Accepted: 3 August 2023

Published: 6 August 2023



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1. Introduction

Currently, educational quality standards demand adjustment to the requirements of our society, entailing the acquisition of competencies and appropriate skill development, creativity, innovation, and interdisciplinarity [1]. For this purpose, it is necessary to offer adequate training in initial teacher education to count with highly qualified professionals [2]. This way, student teachers can “apply in the labour market the learned concepts during their training at university; as well as be able to argue and to resolve problems with a high level of autonomy” [3] (p. 396).

In this context, the role of the Arts disciplines in initial teacher education is key to moving towards the transformation of educational processes, in particular, in those educational cultures that only reward certain academic achievements and that punish failure [4]. Furthermore, Arts teachers play a crucial task in the development of students' artistic capacities and creative abilities, these last ones being very valued and appreciated in the contemporary business sector [5], as, according to Rodrigo Martín et al. [6], “The concept of creativity is, today more than ever, a current issue in different fields of knowledge for the importance it has, both in personal development as in professional qualification and success, in a complex society as ours that demands permanent adjustment to the different and difficult demands that arise in its midst” (p. 28). In this sense, Esquivias [7], in his study of the concept of creativity and creative processes during the different historical periods, points

out that “a constant in all of them is: ‘the novelty and the contribution’, that necessarily implies a sophisticated and complex process in the mind of man” (p. 7) and highlights the importance of schools as the priority area for their development. Arts-enriched learning can improve creativity, imagination, aesthetic sensitivity, and self-confidence, and can have positive effects on general educational attainment.

Nevertheless, despite the unquestionable benefits that Arts education provides for the comprehensive education of individuals and the development of countless capacities (amongst which we find creativity), in the Spanish educational context, they are eternally forgotten subjects. This is depicted by the fact that the educational community generally does not take into account all its potential and interdisciplinary versatility [8], because, in formal education, an almost total disconnection commonly exists between subjects that integrate each stage and even each grade [9].

Thus, Pacheco et al. [10] suggest that competent educational systems should focus on four main areas: students, teachers, the educational context, and programmes/curricula. Students are seen as the principal agents of the teaching–learning process, whereas teachers are the enablers of the learning process that takes place in the specific educational context. In this sense, project-based learning becomes a perfect ally, as it requires imagination, inventiveness, and students’ perspective [11,12], and in addition to its ability to “present knowledge as a global developer, it breaks with the homogeneity of the textbook, it facilitates the interconnection with daily life and encourages the professional autonomy of teachers” [13] (p. 198).

Along these lines, Majó and Baqueró [14] indicate that project-based learning promotes the development of different cross-cutting competencies, such as the capacity to organise and plan and solve conflicts, as well as students’ communicative skills and their autonomy, creativity, and creative imagination, encouraging learning connected to current issues of daily life. Patton [15] defines project-based learning as “students designing, planning, and carrying out an extended project that produces a publicly exhibited output such as a product, publication, or presentation” (p. 13). According to Chacón et al. [16], interdisciplinary projects promote “the integration of knowledge and the analysis for problem resolution and social transformation” (p. 882). Through projects that involve artistic learning, students can approach the poetic and aesthetic dimensions [17], which become relevant and essential in the learning process. In other words, “Educational projects are an effective way for the integration of substantial processes that are developed at university, for the integral training of students, and where the social responsibility of each one of the educational agents crystallises in social transformations” [18] (p. 49).

Stories with Sounds and Music

The origin of stories with a music accompaniment can be traced back to 1910 when the director of a Swedish Gymnasium, J. C. Thulin, connected stories with physical exercises to enrich the activities designed for younger students. The first animated storytelling linked a story and movement. A series of exercises and movements helped to understand the theme behind the story [19]. This methodological strategy served as a starting point for teachers, who added other musical elements and, thus, different models of stories with music emerged [20]. Possibly, the first stories through (or with) music were Peter and the Wolf, with music by Sergei Prokofiev, and The Story of Babar, the Elephant written by Jean de Brunhoff and music by Francis Poulenc [21].

A variety of expressions are used interchangeably to design this kind of approach: storytime with music, storytelling through music, storytelling with music, stories with sounds, or putting/adding sounds to stories. This inconsistent terminology is perhaps related to the fact that this methodological resource is not yet systematically or regularly used in context. Encabo and Rubio [22] define it as a narration with music that gains greater power thanks to the sounds or music of certain events or emotions that are now expressed as well through sound resources, indicating that it is a valuable methodological tool. Bermejo [23] points out that this concept encompasses narrated stories that include

short musical pieces, dramatised stories with songs (a capella and/or accompanied by instruments), and storytelling through music. Following Toboso and Morales [24], storytelling through music can be understood as a dramatised narration where music elements can be introduced to enrich the storytelling. The verbal language (words), the musical language (sounds or silence), and the body language (gestures and movements) are related and intertwined, strengthening the message we are trying to communicate [25]. And even, in some cases, visual language (illustrations) can provide other meanings.

Arteaga et al. [26] already pointed out at the end of the last century the potential of storytelling as an interdisciplinary tool, with great pedagogical value, both for the university classroom and for early childhood and primary students [27]. In this sense, several authors highlight the value of storytelling through music in the teaching profession and the development of professional competencies [27–29]. Storytelling through music, or putting sounds to stories, is a valuable tool that helps approach curriculum contents in a holistic way, through words, sounds, and movement, allowing holistic learning through meaningful experiences for the harmonic and full development of the learner [25,30]. In addition, the potential of computer technology must also be taken into account. For example, Chung [31], Gürsoy [32], and Shinas and Wen [33] highlight the benefits digital storytelling can offer in meaningful classroom practices. Sustained attention, interest and curiosity, emotional and social development, creativity, imagination and performative abilities and development, aesthetic sensitivity, collaborative design, and critical affective practices are some of the cross-curricular themes that can be addressed.

Nevertheless, despite the extensive benefits related to these types of interdisciplinary projects, Rodríguez [27] suggests that few studies focus on incorporating storytelling with music (or adding sound and music to stories) as an interdisciplinary tool in teaching. As some examples of these studies, we can mention the works of Borislavovna Borislova [34], Gillanders, Tojeiro and Casal [35], Martínez and Iñesta [36], Serrano Pastor [37], an de Moya Martínez and Syroyid Syroyid [38].

The study of Author 3 [35] revealed that the great majority of participants of their study had no preuniversity experience in similar activities. What training related to storytelling through sound and music do student teachers receive? What previous experiences during childhood have they had? What do they think about adding sound and music to stories? With the aim of answering these questions, we carried out this research to describe and analyse the experiences of our students, future teachers of early childhood and primary schools, related to storytelling through music or adding sounds to stories, both during their childhood as well as during their initial teacher education. This research study is part of the project entitled “Creative Experiences in Teacher Training: Storytelling Through Music”, involving teachers of the Universities of Minho, A Coruña and Santiago de Compostela. Knowing these data will allow professionals to design strategies for the full integration of creative activities related to music and for the enrichment of interdisciplinary projects during initial teacher education.

2. Materials and Methods

This quantitative study, of a descriptive nature, aimed at identifying the previous experiences of student teachers related to storytelling through sound and music as well as their training during initial teacher education. Descriptive studies “measure, assess or collect data about different concepts (variables), aspects, dimensions or components of the research phenomenon” [39] (p. 102).

In this research undertaken in Galicia (Spain) and the northern region of Portugal, an ad hoc questionnaire was applied. This questionnaire was validated by expert judges from the fields of Didactics of Music Expression, Didactics of Language and Literature, and Research Methods. Cronbach’s alpha was 0.950, which indicates a high reliability [40], and a construct validity of 0.932. It consisted of up to 37 items, some open, some closed, and others with a Likert scale option of five answer statements, where 1 was the lowest value and 5 the highest. Multiple answers were only possible when referring to their experience

in storytelling through music or creating atmospheres in their initial teacher education. The questionnaire had three sections:

- Section 1: identification data (gender, age, university of origin, and degree);
- Section 2: storytelling through sound and music practices and creation of atmospheres during pre-university stages (early childhood, primary education, high school, and other contexts);
- Section 3: storytelling through sound and music practices and creation of atmospheres during initial teacher education.

A purposive sampling was used, where participants were selected for meeting specific criteria [41], in this case, to be students of early childhood or primary teacher education in Braga (Portugal) or Galicia (Spain). In total, 199 student teachers took part in this study ($n = 50$ in Braga and $n = 149$ in Galicia), and they were informed of the study's aim. The questionnaires were filled out in situ in the presence of the researchers, between April and June 2022. Before sample collection, a pilot trial was carried out with 18 students with similar characteristics to determine the weaknesses and strengths of the research. In addition, the BERA [42] guidelines were followed, detailed in the ethical guide for educational research.

Table 1 shows the identification data of participants.

Table 1. Identification data of participants.

Identification		Braga (Portugal)	Galicia (Spain)
Gender	Male	0	13
	Female	49	134
	Other	0	1
	I prefer not to say	1	1
Age	Between 19 and 25	48	133
	Between 26 and 35	1	13
	Between 36 and 45	1	3
	More than 46	0	0
University	do Minho	50	0
	A Coruña	0	58
	Santiago de Compostela	0	87
	Other (Erasmus, SICUE)	0	4
Early Childhood Degree		3	98
Primary Degree		0	38
Early Childhood and Primary Degree		47	14

The data analysis was undertaken using a comparative descriptive approach. This method was considered most appropriate for this study, as it allowed for the identification of similarities and dissimilarities between two or more elements [43], and “it compares objects that belong to the same genre, it is based on the criteria of homogeneity and, thus, it is different from a simple comparison” [44] (p. 11). For the descriptive analysis, the Statistical Package for the Social Sciences (SPSS), version 26, was used, calculating different descriptive statistics such as percentage, media, and standard deviation (except for nominal variables). To evaluate the normality of data and determine the goodness of fit, the Kolmogorov–Smirnov test was used. For the correlation of ordinal variables, the Spearman correlation was used [45].

3. Results

The results are organised around three pillars: The first refers to the previous experiences of student teachers related to storytelling through sound and music; the second refers to their initial teacher education; and the third addresses the resources that can be used in these types of practices.

3.1. Pre-University Practices

In relation to the experiences in storytelling through sound and music or the creation of atmospheres in the different pre-university educational stages, the results indicate that this type of activity is more common in the Portuguese context than in the Spanish setting. As can be seen in Table 2, the differences between the two groups are important: In the Portuguese context, 64% (n = 32 participants) claimed to have had experiences in early childhood education, whilst only 16.8% (n = 25) in the case of Galicia indicated they had. With regard to secondary school, there was a drop in the number of practices, although these prevailed in the Portuguese context, where 46% (n = 23) said they had enjoyed them, against 4% (n = 6) in Galicia. With reference to other contexts, such as extracurricular activities, didactic outings, or specific events at school, in the Portuguese context, 52% (n = 26) pointed out they had enjoyed them, against 25.5% (n = 38) in the Galician context. It is remarkable how these practices have not made a deep impression among Galician students, as 42% claimed not to remember any experience at all. These results suggest that the full integration of these practices is not common in early childhood education in Galicia. Moreover, in view of these results, there is an indication that it is in the framework of non-formal education that these practices acquire more relevance in Galicia, whilst, in the Portuguese context, it is more balanced.

Table 2. Perceptions related to previous experiences in storytelling through music (in %).

Stage	Braga (Portugal)			Galicia (Spain)		
	Yes	No	I Don't Remember	Yes	No	I Don't Remember
Early Childhood	64.0	12.0	24.0	16.8	40.9	42.3
Primary Education	70.0	8.0	22.0	16.1	56.3	27.6
Secondary Education	46.0	30.0	24.0	4.0	79.9	16.1
In other contexts	52.0	18.0	30.0	25.5	55	19.5

It is interesting to highlight that, in those cases where participants remembered having put sound or music to stories, these memories were very positive. Expressions such as “I remember enjoying it very much”, “it is a memory that remains”, “it was a good experience”, or “very good and full of excitement” are some of the appraisals offered by the participants.

On the other hand, the answers to the open questions related to the memories of these experiences indicate that a slight misunderstanding exists, as not all the student teachers knew what is meant by storytelling through sound and music. For example, they linked this type of action with the traditional way of reading: “In primary education, we had an hour a week to read where we read by turns”, “to be in the classroom and the teacher read us books or someone came to read to us”, “the reading of some story by the teacher”, or “to listen to my mother read stories before going to bed”. Nevertheless, for other student teachers, storytelling through sound and music or the creation of atmospheres was related to theatre shows, drama, and putting sound to stories: “music or sounds that accompany the story”, “in the library where there were many activities with puppets and Chinese shadows, as well as the dramatisation of traditional stories”, or “we were taught to use music (for example, clap our hands, stomp our feet, do sounds and noises with our mouth or with music instruments) as a way to trap the listener”. The fact is that, after choosing a story, this is read in different ways. For example, the instruments are selected or created, and afterward, the sounds are added to the story; each word is associated with a sound or action; different paragraphs are selected and sounds or music are added; the story is transformed into a theatrical show, and music and sound are used to accompany the words; and sounds and music, as well as visual illustrations, are used to help understand the story.

3.2. Storytelling through Sound and Music in Initial Teacher Education

With regard to the experiences of storytelling with sound and music or the creation of atmospheres in initial teacher education, and in accordance with participants' appraisals, a difference between both groups can be observed, although not so pronounced in subjects related to Music Didactics. In the Portuguese context, 36% (n = 27) of the participants claimed to have received training in subjects related to Music Didactics, 58% (n = 29) in subjects related to Language Didactics, increasing up to 62% in other subjects. These results contrast with the Galician context, where 42.3% (n = 63) of participants indicated that they had received training in subjects related to Music Didactics, against 28.9% (n = 43) pertaining to Language Didactics, decreasing up to 20.8% (n = 3) in other subjects. Although a slight increase can be observed in the Galician context compared with the pre-university experiences, the data show that the majority of participants had not received the specific training that empowers them to carry out these practices in their future professions (Table 3).

Table 3. Perceptions related to the experiences in storytelling through music in initial teacher education (in %).

Subject	Braga (Portugal)			Galicia (Spain)		
	Yes	No	I Don't Remember	Yes	No	I Don't Remember
Related to Music Didactics	36.0	54.0	10.0	42.3	51.7	6.0
Related to Language Didactics	58.0	34.0	8.0	28.9	61.7	9.4
In other subjects	62.0	14.0	24.0	20.8	66.5	12.7

The activities carried out during their training included the creation of musical instruments with recycled materials, the creation of soundscapes, the inclusion of actions to enrich the narration, and the search for auditory resources. In the open questions, the participants described it as "an enriching experience", "very gratifying", "satisfactory", and "motivating, exciting and inspiring", whilst others commented that "my experience was short and poor", or "positive but scarce". The participants who declared to have received some type of training during their initial teacher education were asked to estimate on a five-point scale the degree to which they considered these practices improved learning, their satisfaction with the training received, and if they felt prepared to use this methodological strategy in their future practices. The mean and standard deviation values were calculated (Table 4), showing an equal or higher value than 4 in all, both in Braga and Galicia (with similar values), except in those related to the degree of satisfaction with the training received and, consequently, to the lack of preparation for its implementation in practice. In the case of Braga, the mean values were higher (around 3 indicates "sufficient") than those shown by the Galician participants, who expressed a satisfaction rate of around 2 (a little).

Table 4. Mean and standard deviation related to the benefits of storytelling with sound according to participants' perceptions.

Benefits of Storytelling with Sound	Braga (Portugal)			Galicia (Spain)		
	n	M	D	n	M	D
It increases motivation towards the learning of music.	42	4.08	1.22	94	4.09	1.02
It increases motivation towards the learning of language/literature.	42	4.04	0.97	94	4.08	1.06
It increases attention towards the narrated story	42	4.27	0.81	94	4.35	0.92

Table 4. Cont.

Benefits of Storytelling with Sound	Braga (Portugal)			Galicia (Spain)		
	n	M	D	n	M	D
It improves student involvement.	42	4.31	0.82	94	4.30	0.97
It is an opportunity to improve meaningful learning.	42	4.29	0.84	94	4.22	0.89
It offers the creation of working spaces in the teaching–learning process.	42	4.00	0.87	94	4.11	0.93
It promotes the design of interdisciplinary activities.	42	4.00	0.93	94	4.28	0.85
It introduces greater innovation in the teaching–learning process.	42	4.02	0.89	94	4.17	0.93
Its use is applicable in different curriculum areas.	42	4.21	0.88	94	4.41	0.88
It allows a more interactive and practical learning.	42	4.27	0.88	94	4.49	0.80
It demands good coordination between the teachers involved.	42	4.14	0.93	94	4.07	0.99
It is a tool I could use in my teaching practices	42	4.39	0.86	94	4.49	0.83
It awakens curiosity in the field of music.	42	4.02	0.92	94	4.19	1.04
It awakens curiosity towards reading.	42	4.15	0.88	94	4.24	0.90
I feel satisfied with the training received in relation to storytelling through sound in the music classroom.	42	3.56	1.05	94	2.86	1.21
The training I have received in the music classroom will allow me to put storytelling through sound into practice.	42	3.50	1.02	94	3.08	1.35
I feel satisfied with the training received in relation to storytelling with sound in the language and literature classroom.	42	3.73	0.99	94	2.79	1.41
The training I have received in the language and literature classroom will allow me to put storytelling through sound into practice.	42	3.85	1.00	94	2.89	1.42

In short, an important percentage of participants who have received training in these types of practices indicated that this tool increases, in a considerable way or a lot, motivation towards the learning of language/literature (70% of the Portuguese participants; 45.6% of the Galician student teachers), whilst the impact on the learning of music was less in the case of Portuguese participants and similar in the Galician context (54% in the Portuguese context and 44.4% in the Galician context). In addition, participants stated that storytelling through sound and music can improve attention towards the narration (78% in Braga against 50.6% in Galicia) and students' involvement (80% in Braga against 50.9% in Galicia). This implies an opportunity to improve meaningful learning (76% in the Portuguese context against 50.2% in the Galician context) and promote the creation of workspaces in the teaching–learning process (64% in Braga against 46.4% in Galicia). On the other hand, student teachers indicated that storytelling through sound and music can enhance the design of interdisciplinary activities (68% in Braga against 51% in Galicia), introduce greater innovation in the teaching–learning process (66% in Braga against 51.6% in Galicia), facilitate greater interactive and practical learning (74% in Braga against 54.3% in Galicia), and enable its application to a broad range of curriculum fields (74% in Braga and 54.3 in the Galician context). Moreover, participants pointed out that these types of practices demand good coordination between the teachers involved (70% in Braga against

46.9% in Galicia) and that it is a tool that can be used in their teaching practices (78% in Braga against 55% in Galicia). Student teachers consider that it can awaken curiosity in the field of music (60% in Braga and 46.2 in Galicia) and reading (72% in Braga against 51.6% in Galicia). In relation to their satisfaction with the training received in the music class, the results reveal that half of the Portuguese participants and only 25% of the Galician student teachers are satisfied. With reference to their perception of the possibility of implementing storytelling through sound in their professional future, 44% of Portuguese participants and 24.1% of Galician student teachers indicated that they could. The same question raised from the angle of the language and literature class revealed that 60% of Portuguese participants and only 20% of Galician student teachers were satisfied with the training received in these subjects, whilst considering their perception regarding the skills to put it into practice, 60% and 22.1%, respectively, could implement similar practices in their professional future.

3.3. Resources for Storytelling through Sound and Music

The last section of the questionnaire referred to the different resources that could enrich storytelling through sound and music. Firstly, student teachers who said they had received training during initial teacher education were asked to rate in what way they had used the different resources. The mean and standard deviation values were calculated (Table 5). Drama was the most used resource, especially in Braga, and Chinese shadows was the least resource in Galicia. The mean related to the use of the different resources was very low in both scenarios.

Table 5. Mean and standard deviation related to the use of different resources.

Use of Resources	Braga (Portugal)			Galicia (Spain)		
	n	M	D	n	M	D
Puppets	42	3.42	1.38	94	2.55	1.4
Chinese shadows	42	2.92	1.36	94	1.63	0.91
Drama	42	4.12	0.927	94	3.12	1.28
Visually projected images	42	3.22	1.35	94	2.91	1.43
Music instruments	42	3.71	1.14	94	2.84	1.38
Created instruments	42	2.53	0.98	94	1.83	1.30
Other sound objects	42	2.96	1.34	94	2.68	1.37
Other resources	42	2.12	1.03	94	2.24	1.32

Concurring with previous findings, the differences between Portuguese and Galician student teachers were significant, as Galician participants had not used puppets (60%), Chinese shadows (79%), drama (36.9%), visually projected images (51%), music instruments (46%), created instruments (89.1%), other sound objects (55.7%), and other resources (73.1%) during their initial teacher education. In contrast, data in the Portuguese context suggest that only 34% had not used puppets, 38% Chinese shadows, 25% drama, 40% visually projected images, 14% music instruments, 32% created instruments, 54% other sound objects, and 70% other resources (Table 6).

Lastly, student teachers were asked in what way they believed the use of these resources had enriched the storytelling, if the case. Again, drama was the resource that student teachers from both contexts perceived to be most enriching, in contrast to created instruments in the Portuguese context and Chinese shadows in the Galician context, as these were the least valued (Table 7). It should be noted that, in relation to this question, medians, in general, were similar in both countries and were not so low as in the previous question.

Table 6. Use of different resources (in %).

Use of Resources	Braga (Portugal)		Galicia (Spain)	
	Yes	No	Yes	No
Puppets	66.0	34.0	40.0	60.0
Chinese shadows	62.0	38.0	21.0	79.0
Drama	98.0	2.0	63.1	36.9
Visually projected images	60.0	40.0	49.0	51.0
Music instruments	86.0	14.0	54.0	46.0
Created instruments	68.0	32.0	18.1	81.9
Other sound objects	46.0	54.0	44.3	55.7
Other resources	30.0	70.0	26.9	73.1

Table 7. Mean and standard deviation in relation to the use of resources to enrich the narration.

Use of Resources to Enrich Narration	Braga (Portugal)			Galicia (Spain)		
	n	M	D	n	M	D
Puppets	42	3.66	1.21	94	3.49	1.37
Chinese shadows	42	3.12	1.29	94	2.42	1.29
Drama	42	4.08	0.83	94	3.94	1.22
Visually projected images	42	3.48	1.18	94	3.29	1.30
Music instruments	42	3.98	0.97	94	3.67	1.28
Created instruments	42	2.94	1.34	94	2.69	1.66
Other sound objects	42	3.28	1.33	94	3.39	1.40
Other resources	42	2.95	1.52	94	2.98	1.58

In summary, in the Galician context, many participants indicated that they had not used these resources and, thus, could not offer their opinion. Those who had included these resources believed that puppets enrich this experience in a considerable way or a lot (32%). In relation to drama, almost half assessed its use as very positive (46.9%), and 27.5% indicated that visually projected images can boost the narration. On the other hand, 36.9% pointed out that musical instruments enrich storytelling, as well as other sound objects (27.5%) or other resources (1.8%). In contrast, in the Portuguese context, as student teachers have had more experience and contact with these types of practices, the percentages are higher. An important number of participants indicated that drama (76%), musical instruments (62%), puppets (46%), and visually projected images (34%) can enrich storytelling. In the case of Chinese shadows (28%), other sound objects (28%) and other resources (2%), these were not so highly valued.

Lastly, to analyse the associations and influences between the used variables (use of puppets, Chinese shadows, drama, visually projected images, music instruments, created instruments, other sound objects, and other resources), the Pearson correlation was used. The results (Table 8) reveal the existence of positive correlations in all cases, with the prevalence of medium–high intensity, although some items had medium and low–medium intensity. In addition, in some items, differences were observed between both countries, for instance, in the “others” category, whereas in Portugal, we found a higher correlation of 0.825 (high), against 0.434 (medium) in Galicia, where the value was lower. It is necessary to highlight that, in Galicia, the values were medium–high (0.61–0.80), showing a higher correlation in created instruments (0.794), followed by puppets (0.742). In Portugal, the items with the least correlation were visually projected images (0.338) and instruments (0.482).

Table 8. Correlations between the uses of resources/enrichment of storytelling.

			Braga (Portugal)		Galicia (Spain)	
			I Have Used	Benefits	I Have Used	Benefits
Puppets	I have used	Corr. Pearson	1.00	0.628	1.00	0.742
		Sig. (2-tailed)		0.00		0.000
	Benefits	Corr. Pearson	0.628	1.00	0.742	1.00
		Sig. (2-tailed)	0.000		0.000	
			N	42	42	94
Chinese shadows	I have used	Corr. Pearson	1.00	0.728	1.00	0.706
		Sig. (2-tailed)		0.000		0.000
	Benefits	Corr. Pearson	0.728	1.00	0.706	1.00
		Sig. (2-tailed)	0.000		0.000	
			N	42	42	94
Dramatisation	I have used	Corr. Pearson	1.00	0.684	1.00	0.677
		Sig. (2-tailed)		0.000		0.000
	Benefits	Corr. Pearson	0.684	1.00	0.677	1.00
		Sig. (2-tailed)	0.000		0.000	
			N	42	42	94
Visually projected images	I have used	Corr. Pearson	1.00	0.338	1.00	0.572
		Sig. (2-tailed)		0.073		0.000
	Benefits	Corr. Pearson	0.338	1.00	0.572	1.00
		Sig. (2-tailed)	0.073		0.000	
			N	42	42	94
Music instruments	I have used	Corr. Pearson	1.00	0.482	1.00	0.651
		Sig. (2-tailed)		0.001		0.000
	Benefits	Corr. Pearson	0.482	1.00	0.651	1.00
		Sig. (2-tailed)	0.001		0.000	
			N	42	42	94
Created instruments	I have used	Corr. Pearson	1.00	0.636	1.00	0.794
		Sig. (2-tailed)		0.000		0.000
	Benefits	Corr. Pearson	0.636	1.00	0.794	1.00
		Sig. (2-tailed)	0.000		0.000	
			N	42	42	94
Other sound objects	I have used	Corr. Pearson	1.00	0.775	1.00	0.607
		Sig. (2-tailed)		0.000		0.000
	Benefits	Corr. Pearson	0.775	1.00	0.607	1.00
		Sig. (2-tailed)	0.000		0.000	
			N	42	42	94
Other resources	I have used	Corr. Pearson	1.00	0.825	1.00	0.434
		Sign. (2-tailed)		0.000		0.001
	Benefits	Corr. Pearson	0.825	1.00	0.434	1.00
		Sig. (2-tailed)	0.000		0.001	
			N	42	42	94

4. Discussion

This study provides insights into the experiences of Galician and Portuguese student teachers, who are future teachers of early childhood and primary education, regarding storytelling through sound and music and the creation of atmospheres, both during their childhood and in initial teacher education, as well as the resources used in these practices. Although the limitations of the study must be taken into account (referring to the number of participants and the contexts in which it was carried out), the findings suggest that creative practices related to storytelling with sound and/or the creation of atmospheres in early childhood and primary education are not so common or enriching as would be expected [27], at least in the Galician context.

Regarding the experiences in storytelling through sound and music or the creation of atmospheres in the different pre-university educational stages, these types of activities are more common in the Portuguese context. These results are similar to the previous findings of Author 3 in the Spanish context, which indicate that the majority of the participants in their study (87%) had no former experience. Accordingly, few participants remembered events related to storytelling during their childhood in the Galician context, in contrast with Portuguese participants, who, in most cases, remembered these experiences in all pre-university stages, highlighting very positive memories.

With reference to their initial teacher education, the findings are less encouraging in both contexts as, although most student teachers had received training in storytelling through sound and music, they did not feel satisfied with this training. They stated that it has not offered them the necessary tools nor qualified them to integrate these practices in the classroom. For example, in Braga, drama (98%) and musical instruments (86%) were the most used resources, but musical instruments were considered not to help enrich the narration, perhaps because of the lack of tools or abilities to put them in practice. This is likely because most had received training in subjects related to Language and Literature Didactics. In contrast, in Galicia, although musical instruments were less used (54%), there was a higher positive correlation with their use, indicating that it was a very valuable resource. In this context, training was in the field of Music Didactics.

To conclude, this study suggests that the training currently provided is fragmented [9], without a holistic perspective [13] that can empower student teachers to develop their professional competencies [28]. Student teachers currently receive training related to interdisciplinary projects in an isolated way, and this training does not enable them or does not offer them the necessary confidence or qualification for the adequate integration of storytelling through sound and music in their professional practice. In essence, there is still a long way to go for the full integration of storytelling through sound and music in the teaching degrees of early childhood and primary education.

Author Contributions: Conceptualization, R.C.-F., S.R.d.S. and C.G.; methodology, R.C.-F. and C.G.; software, R.C.-F. and C.G.; validation, R.C.-F., S.R.d.S. and C.G.; formal analysis, R.C.-F. and C.G.; investigation, R.C.-F., S.R.d.S. and C.G.; resources, R.C.-F. and C.G.; data curation, R.C.-F. and C.G.; writing—original draft preparation, R.C.-F. and C.G.; writing—review and editing, R.C.-F., S.R.d.S. and C.G.; visualisation, R.C.-F., S.R.d.S. and C.G.; supervision, S.R.d.S.; project administration, S.R.d.S.; funding acquisition, R.C.-F. All authors have read and agreed to the published version of the manuscript.

Funding: This research was funded by the University of A Coruña's research grants, final decision C.I. 25/03/2022.

Institutional Review Board Statement: The study was conducted in accordance with the Declaration of Helsinki, and approved by the Ethics Committee of the University of Santiago de Compostela (protocol code USC-54/2021, date of approval 12th January 2022), and is part of the Research project "Promoting Projects in Higher Education. Study of Its Implications".

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: The data presented in this study are available only on request from the corresponding author.

Acknowledgments: We would like to thank the Universidade do Minho for approving our post-doctoral research stay (Rocío Chao-Fernández and Carol Gillanders) from 14th March to 13th June 2022, during which we were able to collaboratively conduct this research study entitled "Creative Experiences in Teacher Training: Storytelling Through Music".

Conflicts of Interest: The authors declare no conflict of interest. The funders had no role in the design of the study; in the collection, analyses, or interpretation of data; in the writing of the manuscript; or in the decision to publish the results.

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