

Research Article

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Recovering Post-Pandemic Learning: Analysis of A Summer Camp Programme in A Non-Formal Education Context

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Abstract

Background/purpose. This article presents the results of a pedagogical experiment involving 602 elementary school children from the north of Portugal. Based on the principles of outdoor learning, this experience was carried out in a non-formal education context during the post-pandemic school year - Férias VIVES. The aim of this initiative was to recover learning that had not been achieved previously, given the context of the pandemic crisis.

Materials/methods. The methodology is guided by the principles of the case study in order to understand the perspectives of the subjects. With online questionnaires, the aim of this research was to identify the aspects of outdoor learning in a non-formal education context that promotes learning and the development of skills. Data collection focused on the perceptions of two groups of people: coordinators, teachers, and monitors, and children and their families. We use content analysis techniques for open questions and descriptive statistical methods for closed-ended questions.

Results. The main results show that learning took place because of the opportunities for carrying out tasks that the outdoor environment provided. It also highlights the potential of curricular and pedagogical links, the use of challenging strategies and tasks that promote greater child involvement, and the building of relationships that promote greater safety, as a structural condition for fostering learning.

Conclusion. This research provides valuable insights for educators, policymakers, and practitioners interested in integrating outdoor learning into broader educational strategies. Furthermore, the study underscores the importance of intentional planning, interdisciplinary collaboration, and professional development in optimizing the effectiveness of outdoor education initiatives.

1. introduction

The COVID-19 pandemic profoundly impacted education systems worldwide, disrupting traditional learning environments and creating significant challenges for students, educators and families. In response to these disruptions, innovative pedagogical approaches have been explored to address learning gaps and support students' holistic development. One such approach is outdoor learning in non-formal education settings, which has gained attention for its potential to promote engagement, well-being, and meaningful learning experiences beyond conventional classroom boundaries.

The importance of more coordinated approaches in non-formal education that promote greater participation by children in their learning is now a prerequisite for the development of meaningful learning. The findings highlight the role of outdoor learning in enhancing curricular and pedagogical links, promoting active engagement through challenging and stimulating activities, and fostering relationships that create a sense of security and belonging among children, as in the most recent studies of Ayotte-Beaudet et al. (2023), Barrable and Lakin (2019), Dale et al. (2020), Fierli et al. (2024), Gilbertson et al. (2022) and Waite (2020). Despite the growing recognition of the importance of outdoor education and non-formal education in developing social, emotional, and cognitive skills, especially in post-pandemic recovery contexts (Ayotte-Beaudet et al., 2023; Gilbertson et al., 2022; Waite, 2020), there are still few empirical studies based on concrete, diversified educational experiences carried out outdoors – especially if we consider the Portuguese context and periods such as school holidays. Existing research tends to focus on formal school contexts, highlighting a gap in the contributions of non-formal education initiatives in promoting meaningful learning and transversal competencies (Fierli et al., 2024; Barrable & Lakin, 2019). Therefore, this study contributes to filling this gap. It is based on a case study within the scope of the Férias VIVES 2021 program, carried out in a municipality in the north of Portugal, with the aim of identifying the aspects of outdoor learning that were recognized by the various stakeholders as promoting the development of learning and skills in the participants. This approach aims to provide empirical evidence on the pedagogical potential of non-formal education in outdoor contexts and its relevance to learning recovery and skills development in the post-COVID-19 period.

In this research we sought to understand how structuring, linking, and changing the environments of a set of activities based on a well-defined intentionality could contribute to the recovery of learning and the development of skills. This research examines the impact of outdoor learning in a non-formal education context through the Férias VIVES 2021 initiative, conducted in the north of Portugal during the post-pandemic school year 2020/2021. The Férias VIVES 2021 program had a four-week duration (July–August 2021), from 8:30 am to 5:30 pm, and provided the children with a diversified set of experiences that invited them to acknowledge, explore, think, and reflect on the body, life, and the world. During these weeks, children had the opportunity to participate in five workshops, namely: (i) a science and mathematics workshop – Sowing, Growing and Flying; (ii) a physical activity workshop – The Olympic Games; (iii) a music workshop – Music in and around the World; (iv) a plastic arts workshop – Manipulate and Create; (v) and a dramatic expression workshop – Dream Shoes. The aim of this program was to recover lost learning while fostering the development of knowledge, skills, and attitudes in children through interdisciplinary and experiential activities. By analyzing the perspectives of various stakeholders, including children, teachers, monitors, coordinators, and families, this research seeks to identify the strengths, challenges, and opportunities associated with outdoor learning in this context.

The significance of this study lies in its contribution to the growing body of research on alternative pedagogical models that support student learning and well-being. By shedding light on these aspects, this research provides valuable insights for educators, policymakers, and practitioners interested in integrating outdoor learning into broader educational strategies. Furthermore, the

study underscores the importance of intentional planning, interdisciplinary collaboration, and professional development in optimizing the effectiveness of outdoor education initiatives.

2. Literature Review – The Analysis of an Experience: Recovering Learning Through Outdoor Learning in Non-Formal Education Contexts

The COVID-19 pandemic has brought challenges of all sorts. In the field of education, the daily challenges have increased with the closing of schools, implying feelings of insecurity, instability, and uncertainty in the educational community, also related to the context of the transition to remote education (ONU, 2020). During this period, there was significant impairment in several areas of student development, including academic, social and emotional skills. The interruption of face-to-face interactions with classmates and teachers hindered the development of cooperation, interpersonal communication, and conflict resolution skills, which are generally strengthened in collaborative school environments (OECD, 2020). In addition, the lack of regular physical activity and prolonged social isolation also contributed to the loss of skills related to emotional self-regulation and teamwork, which are essential for well-being and educational success.

As in other countries, the Portuguese government has implemented specific measures to address the situation and promote the recovery of students' learning, mainly through the 21|23 School+ Plan. This recovery plan presents a “set of measures that are based on educational policies with demonstrated effectiveness in terms of strengthening school autonomy and differentiated educational strategies aimed at promoting school success and, above all, combating inequalities through education” (Council of Ministers Resolution n.º 90/2021, 2021, p. 46). Thus, Portugal has mobilized the efforts of educational communities based on the commitment to recover learning, that is, the engagement of a set of strategies and resources aimed at supporting students in order to overcome any learning gaps that may have emerged during the last few years due to the pandemic caused by COVID-19 (ONU, 2020). This is an action based on the recognition that educational success is the co-responsibility of the school and is therefore achieved with the contribution of all subjects in the community. At the level of the municipalities, several initiatives of non-formal education have also been developed to support schools to recover learning and develop skills.

Among the most affected are those associated with soft skills, such as the ability to work in groups, empathy, and critical thinking, as well as practical skills related to active and experiential learning (OECD, 2020). Dale et al. (2020) carried out a study on the influence of the natural environment on the results of environmental education and concluded that “place-based techniques and the naturalness of the site enhanced novelty, which had a significant relationship with positive learning outcomes (...) [and] programs that occurred in more natural settings exhibited more positive outcomes” (p. 626).

In this sense, non-formal education has been recognized as very useful for the inclusion of all learners as well as adopting methods like cooperative learning and active participation (Fierli et al., 2024). At the same time, learning promoted in outdoor contexts can constitute a fundamental pillar after a period of social isolation, contributing to the progressive recovery of learning and the development of skills so that each subject can reconnect with themselves, their peers and the environment around them (Ayotte-Beaudet et al., 2023; Barrable & Lakin, 2019; Gilbertson et al., 2022; Waite, 2020).

The analysis presented in this article emerges from the experience promoted during the school holidays by a municipality located in the north of Portugal and is an example of non-formal education which incorporates activities carried out in various spaces of the municipality, including outdoor spaces and in which all the people can learn by doing in a cycle of “experience, reflection, conceptualization, and experimentation” (Kolb, 1984, p. 38), where “learning is the process whereby knowledge is created through the transformation of experience” (Kolb, 1984, p. 38). Understanding

the outdoor environment as a learning space promotes the development of skills like self-confidence, self-efficacy (Hovey et al., 2020; Robertson et al., 2009), solidarity (Quay et al., 2002), cooperation and communication (Akarsu, 2025), offering the possibility of complying with the social distancing rules still in force at the time. With countless benefits, these activities offered the students an opportunity to rebuild their connection with their community (Gilbertson et al., 2022; Kolb, 1984). This principle was based on a commitment to enhancing the region's natural and local heritage by promoting activities that appeal to creativity and stimulate physical activity (Barrable & Lakin, 2019; Deschamps et al., 2022). Thus, all the proposed tasks were concerned with the areas compromised during the period of isolation caused by the COVID-19 pandemic (OECD, 2020).

This is an experience of curriculum development concerning outdoor learning, as in the view of Passy et al. (2019), when they define this concept as the set of activities offered outside the regular education centres, whether provided for in the curricula, but which are directly related to the learning proposed in an indoor school context (Deschamps et al., 2022). Several authors argue that “positive outdoor experiences are perceived as helping to build a constructive relationship with our environment and nature” (Barrable & Lakin, 2019, p. 190) and this was an objective after the pandemic. This proposal is adjusted to the objectives by combining the context of school holidays with a commitment to the recovery of learning. The opportunities for outdoor learning exist within and across all curriculum areas, including the themes for development across learning, such as enterprise in education, sustainable development education, and global citizenship (Barrable & Lakin, 2019). We assume the perspective proposed by Waite et al. (2016), who state that “the basic principle of outdoor education is that this education takes place outside the traditional classroom, in a natural or cultural environment (...) where both environmental and social contexts play an essential role” (p. 2). At the same time, different outdoor learning experiences offer opportunities for the development of personal and learning skills in areas such as communication, problem-solving, information technology, working with others and thinking skills (Boyle, 2003; Gilbertson et al., 2022; Hovey et al., 2020; Kolb, 1984). Thus, it is an “assumption that school-based outdoor education experienced in places in students’ community allows them to make more meaningful learning” (Ayotte-Beaudet et al., 2023, p. 2).

The use of strategies based on outdoor games has significant potential to mitigate the effects of the pandemic, in both the cognitive and socio-emotional domains; it is a proposal that promotes the holistic development of participants (Gilbertson et al., 2022; Passy et al., 2019).

Non-formal learning is not without meaning or purpose, which is why it is crucial that the activities, strategies or resources that take place in these contexts are clear about the learning that is planned and expected (Cosme et al., 2021). The existence of challenging tasks is an essential condition for promoting meaningful learning in contexts characterized by the collaboration and direct participation of the different actors involved (Bruner, 1996; Cosme & Trindade, 2004; Cosme et al., 2020; Cosme et al., 2021; Dewey, 1916; Freire, 1996; Vygotsky, 1965).

Remmen and Iversen (2022) remind us that “outdoor education is not a specific method or approach but, rather, includes a variety of pedagogical approaches and practices, depending on the purpose and philosophies of learning outside the classroom” (p. 433). The workshops were thus created with the intention of recovering learning considering the pandemic period. They took place in a particular space and with diversified tools, using play and in line with that recommended by Decree-Law n.º 55/2018, which challenges all educational agents to “ensure that all students acquire the knowledge and develop the abilities and attitudes that contribute to achieving the competences foreseen in the Profile of Students at Compulsory Schooling” (Decree-Law 55/2018, 2018). The actions proposed in each of the workshops were planned according to the principles of a didactic sequence, which invested each week with its own intention (Cosme et al., 2021). The diversity of strategies, in line with a set of goals, constituted opportunities for the development of soft skills

(Cosme et al., 2021), aligned with the Portuguese curriculum (Martins et al., 2017). Non-formal education in outdoor spaces is "not only a means of transferring knowledge but also a rich approach that allows students to realize in-depth and meaningful learning experiences" (Akarsu, 2025, p. 2).

To identify the aspects of outdoor learning in a non-formal education context that were recognized by the people who took part in the activity – coordinators, teachers, parents and students – as promoting the development of knowledge, skills and attitudes in the participants, we will reflect in the following sections on the potential and challenges of implementing the Férias VIVES. To this end, we will present the methodological aspects that underpinned the impact assessment of Férias VIVES, discussed in section 3 from the experience of each workshop, including the satisfaction dimension of each participant. Finally, conclusions are presented by way of a summary.

3. Methodology

This study aimed to identify aspects of outdoor learning in the context of non-formal education that promote learning and the development of skills during a summer camp: Férias VIVES 2021, after the pandemic. For four weeks, activities were prepared and developed around five workshops: a science and mathematics workshop; a physical activity workshop; a music workshop; a plastic arts workshop and a dramatic expression workshop. Each of these workshops had a specific framework and objectives. Table 1 presents the objectives and activities of each of the workshops.

Table 1. Objectives and Activities of Each of the Workshops

Workshop	Objective	Theme			
		1st week	2nd week	3rd week	4th week
Science and Mathematics Workshop	To explore and relate the connections between these two areas and everyday life in an integrated way.	Sow meanings	Water, Air and Earth	Arts, Nature and Maths	Space Travel
Physical Activity Workshop	The Olympic Games aim to awaken children's interest in and taste for physical activity and promote the development of their psychomotor and psychosocial skills through play and one of the greatest sporting events today: the Olympics.	Preparation For the Olympic Games: Exploration And Guidance	Training: Athletics And Handball	Semi-Final: The Gymnastics, Rhythm And Football	Final: Tournaments
Music Workshop	To explore different genres and musical instruments aurally, sing and interpret songs, prioritizing the use of the voice, complementing this with body movements or percussion instruments,	Musical Journey through Europe	Musical Journey through Africa	Musical Journey through Asia and Oceania	Musical Journey through America

	circle games and dance from the five continents.				
Plastic Arts Workshop	To contribute to the development of children's aesthetic and artistic sensitivity, through sensory exploration of materials, shapes, and colors, children develop personal ways of expression and representation of their inner world and reality.	Creative Journey through Europe: A Portuguese Guitar	Creative Journey through Africa and Oceania: African Necklace and Drum/Swing Poi	Creative Journey through Asia: Parrot and Paper Lantern	Creative Journey through America: The Dream Chaser and the Friendship Bracelet
Dramatic Expression Workshop	To develop creative, aesthetic, physical, technical, relational, cultural, and cognitive skills, not only at their specific knowledge level but also at the level of mobilization and systematization of knowledge from other areas.	How to walk without my shoes?’	A day in the life of my shoe	Walk in other people's shoes.	My dream shoe

This summer camp was designed by a team of teachers, with a scientific supervision of a researcher, and developed by a team of nine coordinators. Each coordinator guided the work carried out by 19 teachers and 39 monitors, responsible for monitoring the participants during the execution of the activities according to the activity plan, as well as providing them with the help and support they needed. Teachers and monitors were selected based on their professional experience, educational qualifications, and training. Since it was possible to enroll in the program at the beginning of each week, the total number of children varied weekly, with an average of 467 children per week out of a total of 602 children from the basic education level (280 from the first level – first to fourth grade; 149 from the second level – fifth and sixth grade; and 100 from the third level – seventh to ninth grade). The number of children involved was limited by human resources and available spaces. To undertake the activities, each hub organized students into groups of 15 to 20 children according to age and year of schooling. When analyzing the data regarding the children's enrolment, more than half chose to attend the four weeks, while 13.6% chose to enroll in one week only, as shown in Table 2.

Table 2. Number of Children Per Number of Weeks Attended

Hub	Total number of children enrolled	Enrolment			
		1st week	2nd week	3rd week	4th week
Total	602	82	92	107	321
Entry 3	100%	13.6%	15.3%	17.8%	53.3%

The methodology is guided by the principles of the case study (Yin, 2003) with the aim of understanding the perspectives of the subjects who took part in Férias VIVES. The case is the development of learning and skills outdoors, in non-formal education workshops – Férias VIVES. With

the application of online questionnaires, the aim of the research was to identify the aspects of outdoor learning in a non-formal education context that promote learning and the development of skills. The questionnaires administered contained items using five-point Likert scales to measure perceptions of importance (1 = *not at all important* to 5 = *extremely important*), agreement (1 = *strongly disagree* to 5 = *strongly agree*), and one open question. In particular, data collection focused on the perceptions of:

1. coordinators, teachers, and monitors who responded weekly to a questionnaire on the activities carried out which sought to understand how they perceived the acquisition of knowledge and the development of soft skills and attitudes in children, foreseen as goals in the activity plan for each week, as well as the nature of the proposed activities. The questionnaires administered at the end of each week presented a set of closed-response items in accordance with the activities and objectives of each week (first week – 83 closed-response items; second week – 90 closed-response items and one open-response; third week – 82 closed-response items and one open-response; fourth week – 87 closed-response items and one open-response). We will identify the coordinators, teachers and monitors surveyed as follows: “CPM” followed by the number assigned in the order they filled in the questionnaires.

2. Children and families who answered a questionnaire at the end of the program where they could share their perceptions about the children's lived experience through an analysis of what they considered strengths and aspects to improve, within the rationale of a SWOT analysis. The questionnaires administered to the children have nine closed-response items and five open-response. The questionnaires administered to the families have 12 closed-response items and six open-response. We will identify the children and families surveyed as follows: “C” for children and “F” for families, followed by the number assigned in the order of completion.

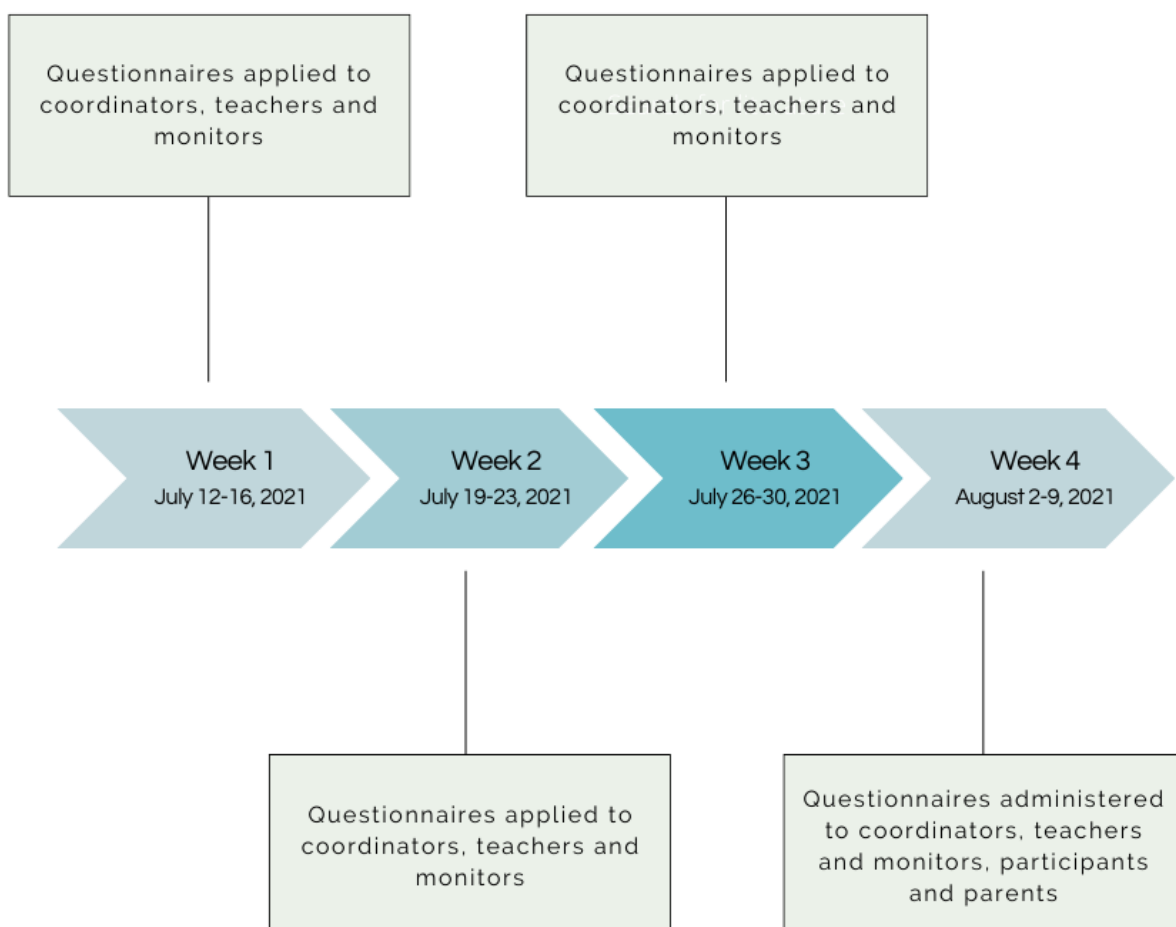


Figure 1. Questionnaires Administered During Férias VIVES.

The surveys administered to the students at the end of Férias VIVES were designed to comprehensively collect their perceptions of the experiences they had during the proposed activities. The closed questions focused on aspects such as the organization, the topics covered, the lessons learned, their participation and the duration of the activities. Relational and social aspects were also considered, such as motivation to participate, sharing experiences with peers and forming new bonds. At the same time, the open-ended questions allowed us to delve deeper into the students' perceptions. These included personal reflections on the weeks they spent, their expectations of the vacation, their favorite activities, the lessons they learned, and suggestions for improvement. In this sense, the open questions played a key role in identifying unforeseen nuances, which enriched the analysis.

The surveys for families, which were administered at the end of the Férias VIVES, were designed to gather their perceptions of the children's educational experience during the activities. The closed questions also focused on the organization, the relevance of the subjects covered, the development of the children's knowledge and their satisfaction with the activities, as well as checking the appropriateness of the duration and time distribution. We also tried to capture the reactions that the participants shared with their parents and guardians throughout the weeks, including motivation, the sharing of experiences, group learning and the formation of new friendships. At the same time, the open-ended questions made it possible to explore accounts of experiences, participation in previous editions, the expectations of parents and the most valued activities. They were also asked to evaluate the strengths and weaknesses of the initiative. These answers enriched our understanding of the impact of the activities, identifying positive aspects and areas for improvement in the children's social and educational development.

The coordinators, teachers, and monitors responded to the surveys on a weekly basis to monitor the development of the activities themselves. The aim of the closed questions was to assess the implementation of the activities and the impact on the children's development, focusing on aspects such as promoting cooperation, respect for cultural differences, collaborative work and the integration of all children. Factors such as the stimulation of mutual help, the dynamics of the activities, the children's motivation and confidence, as well as their ability to work in groups and respect the opinions of others were also analyzed. The survey also covered the development of scientific, motor and bodily skills, as well as the children's involvement in musical and artistic activities, including their appreciation of cultural and artistic events. In addition, the training of the monitors in the effective implementation of the activities was assessed, verifying compliance with the educational proposals and the creation of an inclusive and collaborative environment. The aim of the open-ended questions was to obtain more qualitative and detailed perceptions, allowing those responsible for sharing specific observations about the children's behavior during playtimes, and providing a spontaneous insight into their interactions and dynamics. In addition, these questions were designed to capture the children's perceptions of the work carried out each week, offering a more thorough analysis of their learning, involvement and reflections. These qualitative responses complemented the closed questions, helping to adjust and improve the pedagogical proposals while providing a richer understanding of the impact of the activities on the children's social, cognitive, and emotional development.

The questionnaire was completed by 77.7% of the coordinators and half of the teachers and monitors. Of the 602 children who attended the programme, 65 responded – representing 10.8%, as well as 93 caretakers, representing 15.4%. Table 3 lists the response rates of coordinators, teachers, and monitors in the respective weeks.

Table 3. Response Rate from Coordinators, Teachers, and Monitors Per Week

Total		1st week		2nd week		3rd week		4th week	
		n	%	n	%	n	%	n	%
Coordinators	9	7	77.7%	9	100%	7	77.7%	8	88.8%
Teachers	19	36	62.1%	37	63.8%	29	50%	34	58,6%
Monitors	39								
Total	67	43	64.2%	46	68.6%	36	53.7%	42	62.7%

The collected data were submitted to the content analysis technique (Bardin, 2007) for open questions and descriptive statistical methods for closed-ended questions. The content analysis was based on a categorization process guided by a set of previously established categories, derived from the objectives of the workshops, and was complemented by emerging categories (Bolívar-Botía & Segovia, 2019; Esteves, 2006). Statistical analysis allowed us to “organize and describe the data clearly; identify what is typical and atypical; bring to light differences, relationships and/or patterns; [and] find answers to the problem” (Coutinho, 2015, p. 152). In the case of the data presented here, it is organized into categories and presented in the form of frequency tables. The data collection instruments were validated, taking the subjects and the context into account, which led to adjustments in the questionnaire, especially with regard to language that was closer to the families and children. To guarantee the validity and reliability of the study, we used questionnaires with open and closed questions, applied throughout the program and with the participation of subjects (coordinators, monitors, children, and guardians), who, due to their roles in the program, contributed with different perspectives. The research instruments were validated by a group of content experts prior to data collection. The validity and reliability of the study presented here were ensured by data triangulation at the subjects' level since, as mentioned above, an attempt was made to collect the perceptions of the various subjects involved throughout the program. In addition, the reliability of the participants' answers was guaranteed through a rigorous process of independent data analysis and subsequent cross-checking by the team members, so that any discrepancies or variations could be rectified. We highlight our concern with ethical issues during this study (Amado & Freire, 2017), based on the assumptions set out in the Ethics Charter of the Portuguese Society of Educational Sciences (Baptista et al., 2020) and the Committee on Publication Ethics (COPE). We, therefore, explained the nature and objectives of the research to the participants, requiring their consent by means of an informed consent form. In the case of underage participants, consent was obtained from their guardians. By guaranteeing anonymity and respecting the ethical principles that govern research, we also ensured the privacy of the data collected during the research. We would also like to emphasize that the research was conducted with the aim that the results obtained would contribute to the subjects involved, taking their contribution to the educational field into account.

4. Limitations

The limitations of this study are the percentage of responses. This is not a representative sample of all the participants – see Table 3 – but it should not be overlooked, as it allows the statistical analysis to be combined with the subjects' perceptions.

5. Results

Over four weeks, Férias VIVES had the goal of developing a set of transversal aspects, namely: respect for other cultures and nationalities; the importance of cooperative work among peers, which also includes mutual help; debate and sharing; the inclusion of all children, in a logic of pedagogical differentiation; and systematization of information and learning using a self-assessment and self-regulation framework. The data collected over the four weeks show that these concerns were present, either in full or in part, in the work carried out by the coordinators, teachers and monitors (Table 4).

Table 4. Central (or Essential) Aspects Promoted by the Activities from the Coordinators and Monitors' Perspective

	Week 1			Week 2			Week 3			Week 4		
	Y ¹	P	N	Y	P	N	Y	P	N	Y	P	N
Respect for other cultures and nationalities	90.7 %	7.0 %	2.3 %	69.6 %	30.4 %	--	72.2 %	27.8 %	--	73.8 %	26.2 %	--
Cooperative work	90.7 %	7.0 %	2.3 %	80.4 %	19.6 %	--	72.2 %	27.8 %	--	85.7 %	14.3 %	--
Debate and sharing	81.4 %	14.0 %	4.7 %	63.0 %	23.9 %	13.0 %	63.9 %	33.3 %	2.8 %	73.8 %	23.8 %	2.4 %
Inclusion of all children	88.4 %	7.0 %	4.7 %	67.4 %	30.4 %	2.2 %	72.2 %	25.0 %	2.8 %	73.8 %	23.8 %	2.4 %
Mutual help	88.4 %	9.3 %	2.3 %	73.9 %	23.9 %	2.2 %	69.4 %	27.8 %	2.8 %	83.3 %	14.3 %	2.4 %
Presentation of conclusions	76.7 %	20.9 %	2.3 %	71.7 %	28.3 %	--	63.9 %	30.6 %	5.6 %	71.4 %	28.6 %	--

Learning through play was one of the assumptions that supported the construction of this summer program, even though the restrictions imposed by the COVID-19 pandemic constituted a challenge for the exploration of the planned activities (Ferreira et al., 2021). These activities considered respect for the culture and the rejection of any type of discrimination, with proposals for group activities through cooperative work. As socialization is extremely important for children's integral development and since activities are designed for sharing, mutual help and cooperation between peers (Bruner, 1996; Dewey, 1916; Vygotsky, 1965), it is important to highlight the recognition of 97.8% of caretakers who stated that their children reported situations in which they learned from their peers, and from 96.8% who declared that their children made new friends. When asked, 98.5% of children said they made new friends, which underlines the importance of this program in promoting socialization experiences.

The data presented show that the opportunities given for socializing and the construction of activities that promote cooperation may have facilitated new friendships, as well as the recognition

¹ Y=Yes; P=Partially; N=No

of peers in their learning process. In this sense, monitors, teachers and coordinators reveal that over the weeks – with greater preponderance in the first and last week – they used collaborative work through different group dynamics, as indicated in Table 5, promoting moments for recognition of local cultural heritage and the development of respect for others. Still thinking about cooperative dynamics, it is important to highlight the perception that, in general, the children were able to communicate in a manner adjusted to the situation they experienced. Via analysis of the data in Table 5, an increase in the process of cooperation in learning can be identified in the last week of the program (Fierli et al., 2024; Quay et al., 2002). Apart from integration into the group, all the mentioned indicators show better results in the first and last weeks, which implies the reflection on the formation of groups over the weeks, since children were not always the same, which did not allow a comparison of development from a longitudinal perspective. On the other hand, regarding these data, continuous contact and greater experience in activities that benefit from support and contact with peers can be considered as facilitators of greater learning at a cooperation process level.

Table 5. Aspects Shown by Children in the Perspective of Coordinators and Monitors

	Week 1			Week 2			Week 3			Week 4		
	Y ²	P	N	Y	P	N	Y	P	N	Y	P	N
Integration	79.1 %	20.9 %	--	58.7 %	41.3 %	--	80.6 %	16.7 %	28 %	73.8 %	23.8 %	24 %
Learning cooperation	72.1 %	25.6 %	23 %	58.7 %	41.3 %	--	63.9 %	27.8 %	83 %	76.2 %	23.8 %	--
Respect for the opinion of others	62.8 %	34.9 %	23 %	56.5 %	39.1 %	43 %	55.6 %	38.9 %	56 %	69 %	26.2 %	48 %
Mutual help	62.8 %	32.6 %	47 %	63% %	37% %	--	58.3 %	36.1 %	56 %	81%	14.3 %	48 %
Recognition of local heritage and respect for others	67.4 %	27.9 %	47 %	58.7 %	39.1 %	22 %	55.6 %	38.9 %	56 %	71.4 %	28.6 %	--
Reaching consensus	69.8 %	27.9 %	23 %	54.3 %	45.7 %	--	47.2 %	47.2 %	56 %	69%	26.2 %	48 %
Self-confidence in children	55.8 %	41.9 %	23 %	43.5 %	56.5 %	--	44.4 %	50% %	56 %	61.9 %	38.1 %	--
Communication adjusted to the context	60.5 %	37.2 %	23 %	43.5 %	56.5 %	--	44.4 %	50% %	56 %	52.4 %	42.9 %	48 %
Promotion of collaborative work	76.7 %	20.9 %	23 %	50% %	47.8 %	22 %	58.3 %	38.9 %	28 %	76.2 %	19 %	48 %

² Y=Yes; P=Partially; N=No

The construction of an environment that promotes learning was considered in the planning of the activities. In this sense, it was interesting to see throughout the programme that monitors and coordinators say that, in general (sometimes or always) children showed a secure and self-confident attitude, important conditions for exploring new learning environments and situations (Akarsu, 2025; Ayotte-Beaudet et al., 2023; Barrable & Lakin, 2019; Boyle, 2003; Gilbertson et al., 2022; Kolb, 1984; Waite, 2020). It should be noted that in the last week, there was an increase of around 11% in the perception of this same indicator.

When directing reflection to the caretakers' answers, 90.3% affirm that their children demonstrated that they were always motivated to participate, while 9.7% were seen to be motivated only sometimes. It should be noted that there was no mention of any child who was shown to be unmotivated, a fact confirmed when no child reported feeling unmotivated to participate in the activities, with 80% stating that they always felt motivated and 20% only sometimes. The data indicating that most students were motivated to engage in the program may be correlated with the nature and suitability of the proposed activities (Fierli et al., 2024). This reflection is corroborated by 86% of the caretakers who reported that their children shared their experience about the activities, and only 2.2% indicated an absence of this same aspect – which is a residual value. Such results are reinforced by the children's responses, in which 98.5% claim to talk about the activities and 1.5% never do. Talking about experiences of the program at home is also a very positive indicator, as they reveal significant experiences from the activities that took place during the program. Next, analysis of the work will be shown separately for each workshop. Despite being linked, they had different formal learning goals to be achieved by the children.

5.1. Natural Sciences and Mathematics Workshop

The natural sciences and mathematics workshop crossed knowledge from the areas of environmental studies, natural sciences and mathematics and aimed to: develop and stimulate interest in mathematics and science and to value their role in today's society; work on persistence and autonomy; develop students' confidence in their abilities and knowledge in these subject areas; develop the ability to solve problems and apply diversified strategies; and encourage and develop critical thinking and discussion about the reasonableness of results and procedures.

The analysis of the data provided by the monitors, teachers, and coordinators shows that most of them were comfortable with the concepts discussed. It is worth noting that in the second week, most of those responsible for the dynamization of the workshops indicate that they were partially comfortable. These values correlate with the responses regarding the implementation of activities according to the plan proposed by the authors. One of the presuppositions is that the plan served only as a basis for the work to be carried out and could be adjusted whenever necessary. It should be noted that most respondents reported that they managed to undertake all activities, with rates between 4.7% and 16.7% among those who failed to undertake all the proposed activities, which may indicate the degree of the feasibility of the plan presented by the authors. At the same time, and in line with the responses from caretakers and children, the percentage of those who reported that they did not identify that the children learned new things was between 2.3% and 10%, which can be understood as a residual number, as shown in Table 6. This reinforces the relevance and connections between the proposed activities in a learning recovery setting in contexts in which children regard themselves as active participants and agents (Ayotte-Beaudet et al., 2023; Cosme et al., 2021).

Table 6. Science and Mathematics Workshop: Coordinators' and Monitors' Perspective

	Week 1			Week 2			Week 3			Week 4		
	Y ³	P	N	Y	P	N	Y	P	N	Y	P	N
Comfortable with concepts discussed	76.7 %	18.6 %	4.7 %	39.1 %	54.3 %	6.5%	50.0 %	50.0 %	0.0 %	52.4 %	45.2 %	2.4%
Implementation of activities according to plan	72.1 %	25.6 %	2.3 %	39.1 %	58.7 %	2.2%	66.7 %	33.3 %	0.0 %	57.1 %	40.5 %	2.4%
Promotion of all proposed activities	67.4 %	25.6 %	7.0 %	43.5 %	41.3 %	15.2 %	61.1 %	33.3 %	4.7 %	47.6 %	35.7 %	16.7 %
New learning acquisitions by the children	55.8 %	37.2 %	7.0 %	54.3 %	39.1 %	6.5%	58.3 %	38.9 %	2.3 %	54.8 %	35.7 %	9.5%

In week 2, during this workshop, the “Experience Hour” was carried out. This included a set of activities carried out in conjunction with a partner of the municipality, which leads to recognizing, appreciating and learning from local cultural heritage (Barrable & Lakin, 2019; Dale et al., 2020; Deschamps et al., 2022). This partnership and combination were evaluated by 67.4% of coordinators, teachers and monitors as well adjusted and relevant, in which 73.9% considered that the experiences undertaken allowed the further development of the concepts covered in the week, reinforcing the importance of coordination between the various educational agents involved in children’s education and training.

In general, over the four weeks, the monitors, teachers and coordinators reported positive perceptions of the children's involvement, as they “demonstrated a lot of interest and curiosity in the activities” (CPM 33, week 2) and were “interested and active” (CPM 2, week 2), although there are those who referred to “too much time in the classroom context” (CPM 5, week 2). In the scope of the proposed activities, they mentioned that they were “appropriate in the context of the classroom, not in the program. Many of the activities had to be adapted according to the age and interest of the children, as well as the available material” (CPM 13, week 3). These perceptions are intrinsically linked, on the one hand, to the understanding of the rationality of what vacations are and, on the other hand, to the adaptations of educational needs that each monitor, teacher and coordinator would need to make in relation to their group. It is important to highlight that each child is unique and has specific needs and interests, which implies that planning must be flexible and differentiated.

5.2. Physical Activity Workshop

Physical and sporting activity is essential for the development of the body and for the social and emotional growth of children and young people, and it plays a fundamental role in physical and psychological well-being, in the transmission of values and in the development of motor and body literacy. The aim of the physical activity workshop was to awaken interest in and enjoyment of

³ Y=Yes; P=Partially; N=No

physical activity in the children, promoting harmonious experiences among peers, while trying to enable them to learn and improve their psychomotor and psychosocial skills through play. Thus, the structure presented for the physical activity workshop was related to the biggest sporting event today, the Olympic Games. This link arose from the intention of recreating an atmosphere of celebration and competition. In this workshop, in addition to working on the development of fundamental psychomotor skills, the intention was also to develop psychosocial concepts, such as fair play, autonomy, cooperation, responsibility and team spirit (Akarsu, 2025; Ayotte-Beaudet et al., 2023; Barrable & Lakin, 2019; Boyle, 2003; Gilbertson et al., 2022; Kolb, 1984; Waite, 2020).

The data analysis from the perspective of coordinators and monitors showed that the children were more “at ease” with the concepts mobilized in carrying out the different activities. Once again, this indicator is related to the implementation of activities as proposed in the plan, recording rates between 71.7% and 83.7% associated with managing to undertake all the proposed activities. It should be noted that between 2.3% and 8.7% claimed that they were not able to undertake all the proposed activities. Most respondents acknowledged that children learned new things and that they were able to explore their bodies and the surrounding space. It is highlighted, again, that data for the second week have slight changes in relation to the other weeks when children had the opportunity to get to know and explore the school of road education, another local offer of a school partner of the municipality. In this context, 95.7% of coordinators and monitors considered that this activity was suitable and relevant; 80.4% agreed that it was an opportunity to extend the concepts covered in the week and that it enhanced the knowledge of traffic rules so that the perception of coordinators and monitors reveals that “the children really liked the driving school and they got more notions about the rules of the highway code” (CPM 23, week 2).

Table 7. Physical Activity Workshop Development: Coordinators and Monitors Perspective

	Week 1			Week 2			Week 3			Week 4		
	Y ⁴	P	N	Y	P	N	Y	P	N	Y	P	N
Comfort with concepts discussed	90.7 %	7.0%	2.3 %	73.9 %	21.7 %	4.3 %	72.2 %	19.4 %	8.3 %	78.6 %	16.7 %	4.8 %
Implementation of activities according to plan	79.1 %	18.6 %	2.3 %	63.0 %	32.6 %	4.3 %	72.2 %	22.2 %	5.6 %	78.6 %	19.0 %	2.4 %
Promotion of all proposed activities	83.7 %	14.0 %	2.3 %	71.7 %	19.6 %	8.7 %	72.2 %	22.2 %	5.6 %	73.8 %	23.8 %	2.4 %
New learning acquisitions by the children	69.8 %	25.6 %	4.7 %	50.0 %	37.0 %	13.0 %	66.7 %	25.0 %	8.3 %	61.9 %	33.3 %	4.8 %
Exploration of the body and the surrounding space	79.1 %	18.6 %	2.3 %	71.7 %	26.1 %	2.2 %	69.4 %	22.2 %	8.3 %	66.7 %	28.6 %	4.8 %

⁴ Y=Yes; P=Partially; N=No

The perceptions of the monitors, teachers and coordinators about the work carried out over the weeks revealed the children's interest in sports and outdoor activities: "Children and teenagers show a lot of interest in sports activities" (CPM 38, week 2); "love outdoor activities" (CPM 12, week 2). However, they pointed out the need for an adjustment of the activities in relation to age, because "physical activity is appreciated by all, but the types of games and exercises to be done should be chosen depending on age" (CPM 3, week 2). This type of assessment and the fact that it was a workshop that encompassed a multiplicity of modalities reinforces the need for practical training for the technicians who undertook the activities with the children.

In the third week, the children took an exploratory tour of the Uíma River, with the rationale of approaching nature based on the exploration and knowledge of local heritage (Barrable & Lakin, 2019; Dale et al., 2020; Deschamps et al., 2022). Although less significantly compared to the perception of the previous activity, 75% of respondents considered that the activity was appropriate and relevant, with 61.1% considering it an opportunity to further develop the concepts covered in the week, highlighting in their discourse that "the participation of the children, as well as the outings (for example, a visit to the Parque das Ribeiras – Rio Uíma), was greeted with great enthusiasm by all (Fierli et al., 2024). In general, they showed curiosity or interest in the different themes addressed or activities carried out" (CPM 14, week 3).

5.3. Music Workshop

The workshop "Music in and around the World" is an invitation to a musical journey across the five continents, in which children could aurally explore different genres and musical instruments and sing and interpret songs. The use of their voices was favored and complemented with body movements or percussion instruments, circle games, and dance. This workshop was intended to: develop expressive and creative musical skills, explore sound-musical experimentation, improvisation and musical composition; carry out activities related to musical performance/execution, that is, singing, playing, and moving, as well as relating these to ways of publicly communicating/sharing performances and/or creations; develop skills related to processes of discrimination, analysis and comparison of sound-musical elements, through critical reflection on musical universes; structure self-knowledge, develop self-esteem and self-confidence attitudes and value their identity and roots; recognize and value historical and cultural heritage and develop respect for other peoples and cultures, rejecting any type of discrimination; and improve personal and social skills.

In the music workshop, mastering the concepts discussed from week 2 onwards seems to have been a challenge from the perspective of coordinators and monitors. As for its content, the data show that children revealed "little interest in assimilating music from other countries" (CPM 3, week 2); however, in terms of participation in the activities, they state that "the first level liked it and had fun, but the second and third levels did not like it and were quite disinterested" (CPM 16, week 3). These analyses highlight the importance of the children's educational background and the urgency of educating everyone for life in society and in an increasingly diverse world. Music is an art which is present in all cultures, while it constitutes a means of self-knowledge and sharing of experiences and emotions that provide moments of well-being, allowing the development of multiple potentials.

There is a correlation of these rates with the implementation of activities and the dynamization of all activities – both in weeks 2 and 3, the rate of respondents who answered "partially" surpassed those who answered "yes". In all of these workshops, they worked on very distinct and specific areas of knowledge, which is why it is important to understand the level of knowledge of the technicians, as it directly impacts the didactics of the workshop itself.

One of the main objectives of the music workshop was to explore the vocal apparatus, such as respect and knowledge of cultures other than Portuguese/European, which is an essential component in the integral development of children, young people, and human beings. The

discrepancy between week 1, when music in Europe was discussed, and the other weeks, where music from other continents was explored, is also present when they were asked about the new learning acquisitions and the exploration of new ways of making music. Every week, most respondents identified new learnings and ways of making music, which indicates that the workshop's goals were achieved (Ayotte-Beaudet et al., 2023).

Table 8. Music Workshop: Coordinators and Monitors Perspective

	Week 1			Week 2			Week 3			Week 4		
	Y ⁵	P	N	Y	P	N	Y	P	N	Y	P	N
Comfort with concepts discussed	74.4 %	20.9 %	4.7 %	41.3 %	47.8 %	10.9 %	52.8 %	38.9 %	8.3 %	59.5 %	33.3 %	7.1 %
Implementation of activities according to plan	65.1 %	32.6 %	2.3 %	32.6 %	60.9 %	6.5 %	47.2 %	50.0 %	2.8 %	47.6 %	45.2 %	7.1 %
Promotion of all proposed activities	62.8 %	32.6 %	4.7 %	39.1 %	41.3 %	19.6 %	44.4 %	47.2 %	8.3 %	47.6 %	33.3 %	19.0 %
New learning acquisitions by the children	83.7 %	14.0 %	9.3 %	47.8 %	39.1 %	13.0 %	50.0 %	44.4 %	5.6 %	57.1 %	33.3 %	9.5 %
Exploration of new ways to make music	72.1 %	23.3 %	4.7 %	50.0 %	43.5 %	6.5 %	50.0 %	16.7 %	5.6 %	59.5 %	33.3 %	7.1 %

5.4. Plastic Arts Workshop

The intention of the plastic arts workshop was to contribute to the development of the aesthetic and artistic sensibility of children through the sensory exploration of materials, shapes, and colors. This feature enables the development of personal forms of expression and representation of the inner world and the reality of each child, where each child was invited to make a journey across the five continents that accompanied the musical journey of the "Music in the World" workshop. In this workshop, the intention was for the children to have the opportunity to: develop an aesthetic and artistic appreciation and understanding, among other aspects, of the expressiveness contained in the language of images and/or other visual narratives; learn about concepts and techniques in different visual narratives, applying the knowledge learned in observational situations and/or their plastic experimentation and stimulating the development of their representation style; develop apprehension and interpretation skills, in contact with different visual universes, stimulating multiple readings of different cultural circumstances; promote the plastic experimentation with concepts and themes in (re)inventing solutions to create new images, relating concepts, materials, means and techniques, structure self-knowledge, develop self-esteem and self-confidence attitudes and value

⁵ Y=Yes; P=Partially; N=No

their identity and roots; recognize and value their historical and cultural heritage and develop respect for other peoples and cultures, rejecting any type of discrimination.

The analysis of data from monitors, teachers, and coordinators demonstrates that, for the most part, there was mastery of the concepts and capacities addressed during the development of this workshop, which was clearly evident. In weeks 1, 3 and 4, the data show that everyone implemented the activities as proposed (totally or partially) with rates that again correlate with mastery of the concepts discussed. The dynamization of activities presents residual rates in these same weeks (1, 3 and 4) – between 2.3% and 5.6% – but indicates 13% in week 2. Overall, including week 2, respondents say that children learned new things and developed their fine motor skills and that it was considered “the most captivating workshop for different age groups” (CPM 36, week 2).

Table 9. Plastic Arts Workshop Development: Coordinators and Monitors Perspective

	Week 1			Week 2			Week 3			Week 4		
	Y ⁶	P	N	Y	P	N	Y	P	N	Y	P	N
Comfort with concepts discussed	88.4 %	11.6 %	--	65.2 %	30.4 %	4.3%	72.2 %	25.0 %	2.8 %	73.8 %	23.8 %	2.4 %
Implementation of activities according to plan	83.7 %	16.3 %	--	54.3 %	43.5 %	2.2%	69.4 %	30.6 %	--	66.7 %	33.3 %	--
Promotion of all proposed activities	81.4 %	16.3 %	2.3 %	63.0 %	23.9 %	13.0 %	72.2 %	22.2 %	5.6 %	64.3 %	31.0 %	4.8 %
New learning acquisitions by the children	76.7 %	18.6 %	4.7 %	67.4 %	30.4 %	2.2%	69.4 %	30.6 %	--	59.5 %	38.1 %	2.4 %
Fine motor skills development	81.4 %	16.3 %	2.3 %	69.6 %	23.9 %	6.5%	75.0 %	25.0 %	--	69.0 %	28.6 %	2.4 %

5.5. Dramatic Expression Workshop

Arts education is essential for the intellectual, social, physical, and emotional growth of children and young people. As drama is an over-arching/all-embracing/all-encompassing activity, it encompasses the plastic, sound, word, and movement dimensions in action, and is a privileged area in artistic education. Drama activity is a group practice that develops from the knowledge and individual experiences that students have, and which can provide the acquisition and understanding of new learning acquisitions through the exploration of dramatic content. This gives it a privileged status as a link between school, family and the environment, an essential condition for learning to take on new meanings, which is reflected in the pleasure of learning (Fierli et al., 2024). As it is governed by methodologies based on cooperative practices (Fierli et al., 2024; Quay et al., 2002), that is, which promote work that benefits from peer support in the construction of learning and

⁶ Y=Yes; P=Partially; N=No

interdependence within the group, this constitutes an opportunity to generate reflection on values and attitudes.

The playful character of the drama game responds to the primordial needs of the human being – the externalization of oneself in the context of communication and the search for pleasure in the construction of learning. Thus, it was hoped that this workshop would contribute to the development of transversal skills, to be gradually learned throughout basic education, as, in all activities in this area, it seeks to promote habits and opportunities in the student to: question reality by means of improvisations, supported by personal experiences, observation and interpretation of the world and the group's knowledge; use body and vocal language to express feelings and ideas; use technological knowledge linked to light, sound, image and plastic forms as producers of signs that enrich theatrical language; explore the dimension of words as a fundamental element of theatricality in their written, read, said, spoken and sung aspects; enrich the use of words by developing aspects related to diction, sonority, rhythm, intention and interpretation; stimulate individual and collective reflection, written and oral, as a way of developing a specific speech; and value the understanding of foreign languages as a vehicle for accessing information, particularly in computer media and new multimedia technologies, for communication between people of different cultures and origins, and even as an enriching element of acting and of the drama game.

In the dramatic expression workshop, it can be noted that respondents reported that they were less comfortable with the concepts covered in week 2 – the week in which the partial implementation of the designed activities surpassed the implementation in its entirety, as only 39.1% indicate having managed to undertake all the proposed activities. In weeks 1 and 3, there are no records of non-implementation of activities as proposed. In general, coordinators, teachers and monitors affirm the feeling that the children learned new things and reflected on themselves – with a slight difference in week 2. From the perceptions of respondents during the second week of the workshop, it is clear that “the children showed some difficulty in expressing themselves” (CPM 13, week 2), although they reveal that children are making “progress”, which leads us to believe that the difficulty presented focuses on the lack of practice of dramatic expression: “children are not comfortable with dramatic expression. Dramatic expression is important, and I think children are making progress” (CPM 27, week 2). It is noteworthy that week 2 was focused on positioning themselves in the other's shoes, which can be more complex at younger ages given the children's developmental stage.

Table 10. Dramatic Expression Workshop Development: Coordinators and Monitors Perspective

	Week 1			Week 2			Week 3			Week 4		
	Y ⁷	P	N	Y	P	N	Y	P	N	Y	P	N
Comfort with concepts discussed	74.4 %	20.9 %	4.7 %	50.0 %	41.3 %	8.7%	58.3 %	36.1 %	5.6 %	59.5 %	33.3 %	7.1%
Implementation of activities according to plan	65.1 %	34.9 %	--	41.3 %	54.3 %	4.3%	63.9 %	36.1 %	--	59.5 %	33.3 %	7.1%

⁷ Y=Yes; P=Partially; N=No

Promotion of all proposed activities	72.1 %	25.6 %	2.3 %	39.1 %	37.0 %	23.9 %	63.9 %	33.3 %	2.8 %	59.5 %	26.2 %	14.3 %
New learning acquisitions by the children	69.8 %	27.9 %	2.3 %	54.3 %	34.8 %	10.9 %	63.9 %	36.1 %	--	61.9 %	28.6 %	9.5 %
Self-reflection	67.4 %	20.9 %	11.6 %	45.7 %	43.5 %	10.9 %	63.9 %	33.3 %	2.8 %	57.1 %	33.3 %	9.5 %

5.6. Satisfaction with Férias VIVES

Caretakers and children were satisfied or very satisfied with various aspects related to this programme, in which the indicator “not very satisfied” is between 1.1% and 3.2% in caretakers and between 1.5% and 3.1% in children – a residual value. The accounts of the caretakers corroborate this result: “he liked it a lot. Which makes me very satisfied to repeat the experience, as it is possible” (F 71); “My child on the last day of VIVES came to me crying because it was the last day; she liked it a lot” (F 52); “He just loved it” (F 62). The highest level of dissatisfaction, albeit residual, is due to the organization and duration of the proposed activities, as well as the satisfaction of the children in participating in the proposed activities. The latter seems incoherent when compared to the answers analyzed in the previous sections, mainly associated with motivation to participate in the program, but also the children were asked about their participation in the activities, in which only 1.5% did not show full satisfaction, as shown in Table 11.

Table 11. Caretakers’ Satisfaction with Férias VIVES

	Very satisfied	Satisfied	Not satisfied
Organization of the proposed activities	57%	39.8%	3.2%
Relevance of the subjects covered in the workshops	50.5%	48.4%	1.1%
Knowledge acquisition in children	53.8%	45.2%	1.1%
Your child’s satisfaction in participating in the proposed activities	59.1%	37.6%	3.2%
Duration of the devised proposals	49.5%	47.3%	3.2%
Distribution of time in the workshops	50.5%	47.3%	2.2%

Most children (90.5%) said that these holidays were better than they imagined. The reports of these children reinforce their satisfaction with the experiences they had lived: “I really enjoyed these weeks because I played, danced and learned” (C 12); “It was an experience to repeat” (C 13); “The activities were fun and interesting. I liked the topics covered” (C 17).

Table 12. Children' Satisfaction with Férias VIVES 2021

	😊	🙂	😐
Activity plan	75.4%	75.4%	75.4%
Subjects covered	23.1%	23.1%	23.1%
Learning acquisitions	1.5%	1.5%	1.5%
Participation in the activities	61.5%	61.5%	61.5%
Duration of the activities	36.9%	36.9%	36.9%

When asked about their favorite activities performed during Férias VIVES, 70.76% of children mentioned activities related to the sports workshop and the outings (visits to the beach, the Uíma River, the School of Road Education), and 15.38% reported that they enjoyed all the activities in which they participated, as per the studies of Dale et al. (2020), Hovey et al. (2020), Passy et al. (2019), Robertson et al. (2009) and Waite et al. (2016).

6. Discussion

Analysis of the Férias VIVES data reveals that the program,e comprehensively fulfilled its objectives of promoting the development of knowledge, skills, and attitudes in a non-formal outdoor education context (Hovey et al., 2020; Kolb, 1984; Quay et al., 2002; Robertson et al., 2009). The integration of diverse activities, such as dramatic expression workshops, music, visual arts, physical activities and outdoor explorations, provided an enriching educational experience that stimulated the children's multidimensional growth, in line with the perspective discussed by Ayotte-Beaudet et al. (2023). In this sense, the analysis of the data from the different participants indicates the existence of significant, challenging, and pedagogical intention-filled activities is conducive to greater involvement of children and promotes more learning. The value placed on cooperative dynamics and interaction between peers stands out. The high percentage of parents (97.8%) and children (98.5%) who reported making new friends is evidence of the promotion of opportunities for socialization – an area of great constraint in the context of the pandemic (OECD, 2020). Likewise, mutual support, active listening, and respect for differences were present in the coordinators' speeches as well as in the participants' perceptions. The progression over the weeks, with an improvement in the indicators in the respondents' perceptions of the development of cooperation, reinforces the educational potential of the outdoor experience in a non-formal education context, in line with the perspective of Quay et al. (2002) and Fierli et al. (2024).

In terms of motivation for learning, the data point to a high level of involvement on the part of the children, with 90.3% of parents indicating that their children were “always motivated”, with no mention of demotivation. This motivation is matched by the children's own response (80% always motivated) and the spontaneous sharing of their experiences at home (98.5%), which reflects the meaning attributed to the activities, as suggested by Kolb (1984) and Bruner (1996). Motivation was also associated with the possibility of exploring, experimenting and building knowledge through playful and sensory proposals in contact with nature and the local heritage – a strategy consistent with the principles of outdoor learning (Waite, 2020; Gilbertson et al., 2022). It is important to highlight the importance of outdoor activities in these age groups for achieving complementary learning intentions and the way in which nature and the outdoor space can enhance more stimuli, promoting curiosity and willingness to explore the environment – constituting a learning environment, in line with Passy et al. (2019) and Akarsu (2025).

At the level of coordinators and teachers, the training and specific knowledge in relation to the topics covered were considered essential conditions for creating challenging environments (Bruner, 1996; Cosme et al., 2021). The greatest difficulties experienced by children are connected to mastering and understanding the concepts underlying each session, which are more evident in the science and physical activity workshops. On the other hand, there are great difficulties in terms of knowledge and exploration of the body in its most diverse dimensions (movements, vocal apparatus, manipulations), as well as in terms of communication and expression about what they feel and want to express, which may be correlated with the time children have been at home.

The responses of the promoters of this program reinforce the importance of planning with intentionality, sequentially, and with flexibility so as to operationalize and adapt it to the unpredictability of different classrooms or learning contexts (Cosme & Trindade, 2004; Cosme et al., 2020; Cosme et al., 2021; Freire, 1996). This emphasizes the relevance of training and qualifications, ranging from specific knowledge of each area to a broader understanding of methods, strategies, resources, and learning situations (Cosme & Trindade, 2004; Cosme et al., 2020; Cosme et al., 2021). On the other hand, this initiative shows the importance of field trips to carry out activities, pluralizing and diversifying learning spaces, while also seeking and encouraging the appreciation of local heritage, recognizing it as a significant promoter of cultural learning (Cosme et al., 2021).

Another fact arises around the options of the team responsible for designing this program. Analyzing the set of possibilities and the way the weeks were structured, the importance of considering the development of activities that involve children in multidisciplinary activities designed in a coordinated way should be highlighted. Over these four weeks, there are examples of how projects that promote culturally significant learning can be carried out; the environment was explored and cooperation, and self-reflection on the learning process (Akarsu, 2025; Cosme et al., 2021; Hovey et al., 2020; Robertson et al., 2009; Quay et al., 2002), and monitoring of the action by the professionals who accompanied it are encouraged; and the children were involved, based on a proposal committed to the integral development of the participants (Cosme et al., 2020; Freire, 1996).

It is important that professionals reported that the children felt safe and self-confident (Hovey et al., 2020; Robertson et al., 2009), an important condition for the exploration of new environments and learning situations, with this indicator showing an increase of 11% in the last week. These types of results demonstrate the importance of emotions and relationships as a predictor of more learning and greater success.

The five workshops made different contributions to learning:

I. The natural sciences and maths workshop stood out for its development of critical thinking, autonomy and problem-solving, with activities linked to the curriculum and adjusted to the age group. Despite some logistical constraints and necessary adaptations, the perception of learning was clearly positive (over 90%), with an emphasis on the balance between experiences and formal content, especially during the 'Experience Hour', which reinforced the connection to local heritage (Dale et al., 2020; Deschamps et al., 2022).

II. The physical activity workshop, centred on Olympic values and psychomotor skills, promoted not only physical development, but also cooperation and fair play. The visit to the School of Road Education was particularly valued by the participants, indicating that liaising with local partners reinforces the relevance and attribution of meaning to the information provided (Ayotte-Beaudet et al., 2023).

III. The music workshop presented greater challenges, especially in the exploration of non-European repertoires, which reveals the importance of investing in intercultural education from an

early age and in teachers' professional development. Even so, most of the participants recognized the development of new learning from diverse ways of making music, underlining the role of music in developing expressive and identity skills (Barrable & Lakin, 2019).

IV. In the visual arts workshop, there was a high level of adherence and involvement from the children, and it was even considered by several participants to be the most captivating. This reveals the potential of artistic practices to enhance creativity, personal identity and respect for cultural diversity, essential pillars of an education committed to individuals' holistic development (Cosme et al., 2021).

V. The dramatic expression workshop, despite some initial difficulties, was an opportunity to promote empathy, emotional expression and reflection on oneself and others – crucial aspects after the social isolation experienced during the pandemic. The challenge of putting oneself in another person's shoes, mentioned by the coordinators, is understandable from the point of view of child development, but the progress made indicates the potential of the pedagogical options adopted (Fierli et al., 2024).

Finally, taking into account the respondents' perspective on the structure of the program, based on outdoor activities in a non-formal education context and guided by the principles of methodologies that promote active learning, made it possible to respond to many of the weaknesses identified in the post-pandemic period. The multidisciplinary nature of the workshops and the combination with the local context proved to be strategies that promote situated and meaningful learning, in line with Waite et al. (2016) and Ayotte-Beaudet et al. (2023).

7. Conclusions and Recommendations

At a time when the pandemic marked the absence of school in children's lives, reducing direct contact with peers, the impact on socialization and collaboration experiences among peers is becoming increasingly clear (OECD, 2020). It is in this context that an initiative was created in which children could experience a set of activities concerning learning recovery, the enhancement and further development of local heritage, as well as the global development of children through recreational activities (Akarsu, 2025; Deschamps et al., 2022). Moreover, outdoor learning in non-formal education contexts offers memorable, genuine, and context-rich experiences that expand upon conventional classroom learning, typically within nearby areas, school premises, and playgrounds (Deschamps et al., 2022). It is aligned with various curriculum goals spanning multiple subjects and topics and frequently incorporates physical activities (Waite, 2020).

This study aimed to identify aspects of outdoor learning in the context of non-formal education that promote learning and the development of skills during a summer camp: Férias VIVES 2021, after the pandemic situation. In short, there is a set of factors that can promote greater learning and skills development in a non-formal education context, namely: diversification of spaces, sequential, curricular and pedagogical coordination, the use of strategies that promote greater involvement of children; creating challenging tasks; and building relationships that promote greater security, and therefore more learning (Bruner, 1996; Cosme & Trindade, 2004; Cosme et al., 2020; Cosme et al., 2021; Freire, 1996; Vygotsky, 1965). In other words, by promoting outdoor learning in a non-formal education context based on a learning recovery plan, it is possible not only to fill in gaps in content learning, but also to promote the development of skills. In this sense, the approach of Férias VIVES indicated the importance of educational activities that consider children's holistic development, allowing them to rebuild their social connections and resume their learning path in a meaningful way.

In this way, Férias VIVES 2021 is an inspiring example of how non-formal education, centered on humanist values, and cooperative practices and based on the principles of methodologies that

promote active learning, can be a space for pedagogical innovation and the integral development of children.

8. Suggestions

Following the research carried out and in line with the most recent studies on the development of outdoor activities, we consider it important to present a set of recommendations that could support future projects. The aim of these suggestions is to ensure that the proposed activities promote meaningful learning and the integral development of children, taking the specificities of post-pandemic contexts into account. In order to promote meaningful learning and the development of skills, it is important to guarantee training for the professionals who will manage the activities; this training should focus on the content and dynamics proposed in the activities. The understanding of planning by professionals is a facilitating variable in readjusting activities to the needs and singularities of groups of children and young people.

Another recommendation is related to valuing and promoting activities in different environments, contributing to the appreciation of local heritage and motivation, as mentioned by children and families. Caretakers reported that “because of the pandemic, it wouldn't have been possible to plan more outings, but they were what had the most positive impact on them!” (F 30). It is therefore suggested that more external activities be incorporated into the projects, whenever possible, with the support of local partnerships that can enrich the educational experience.

The data indicate that cooperation and inclusion play crucial roles in the success of the activities. Thus, an important recommendation is to expand collaborative learning practices, promoting opportunities for children to interact with each other and share experiences. In addition, inclusive education should always be a priority, ensuring that all participants, regardless of their background or individual characteristics, have equal opportunities for participation and development. At the same time, to ensure that the activities achieve their maximum potential impact, it is essential for the educational projects to include diverse pedagogical strategies that are adapted to the diversity of ages and interests of the participants. In the case of the art activities, for example, it was observed that some children found it difficult to get involved in certain dynamics, such as the dramatic expression workshop, which required greater attention to the children's stage of development. Thus, flexibility in planning activities – adjusting to the different learning levels and preferences of the participants – can promote a more inclusive and motivating environment for everyone.

Another important suggestion is to implement continuous monitoring mechanisms during the implementation of the activities. Although the program was successful, regular analysis and reflection on the impact of the activities and the reactions of the participants can help improve pedagogical approaches. Feedback from children, carers and professionals alike is essential for the continuous readjustment of activities, ensuring that they remain relevant and appropriate.

Constant communication with families is also an essential factor for the success of any educational program. The families' reports reveal their awareness of the benefits of the experiences shared by their children, who, when discussing the activities carried out in the program, demonstrated significant learning.

To gain greater knowledge about the impact of outdoor learning in non-formal learning contexts, it would be important to expand the scalability of this programme to other contexts.

Declarations

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writing—review and editing, DF, LL, CT and AC; visualization, DF, LL and AC; supervision, DF, LL and AC; project administration, DF, LL and AC. All authors have read and agreed to the published version of the manuscript.

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