



Characterization of an Intervention Program for Physical Education and School Sport in Primary Education Through Document Analysis of Planned Tasks

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Abstract

Motor activity plays a key role in holistic development during childhood, with physical education (PE) and school sport (SS) constituting two of the main regulated settings for motor activity among school-age children. This study aimed to characterize the pedagogical approach of a motor intervention program designed in a coordinated manner for both settings. To this end, a document analysis was conducted of the tasks included in the PE and SS program plans, using an ad hoc observational tool that enabled the activities to be categorized according to their structural characteristics. A total of 3 890 tasks were analyzed and classified according to variables related to the management of practice time and the internal logic of motor situations. The results revealed a program with a high level of motor engagement, characterized by a high proportion of motor tasks, high participation density, and a balanced distribution across the different motor action domains. A predominantly noncompetitive orientation and a diversity of practice settings that foster balanced development of students' motor competence were also observed. Overall, the program plans analyzed reflected an innovative pedagogical approach with educational potential for integrating PE and SS in a complementary manner. The structural analysis of tasks was also confirmed as a useful strategy for the pedagogical evaluation of motor intervention programs in school settings.

Keywords: evaluation, internal logic, motor competence, sport instruction

Introduction

The physical and motor dimension is essential for the holistic and balanced development of individuals, particularly at an early age. According to Piaget (1985), motor activity plays a decisive role in maturation and learning during childhood by enabling children to discover and interact with their environment, thus acquiring particular relevance at this stage of life. However, the current sociocultural context, characterized by sedentary behavior, occupational demands, and the proliferation of technology-based leisure, has led to a progressive disconnection from motor experiences, particularly among younger populations (Devís, 2018).

Against this backdrop, promoting practice settings that foster physical and motor development is particularly important. Motor practice settings are understood as social contexts in which motor situations are carried out with a common purpose among participants and can range widely, from free play to competitive training (Martínez-Santos, 2007). Among these, regulated settings such as physical education (PE) and school sport (SS) are governed by legal frameworks and pursue educational objectives, whether in curricular or extracurricular contexts.

In many education systems, PE and SS are complementary settings aimed at promoting students' holistic development through motor practice. In the context of this study, in the Basque Autonomous Community, both settings are governed by specific regulatory frameworks (Decree 77/2023 for PE and Decree 125/2008 for SS) that promote the development of motor competence from a holistic perspective and encourage physical and sports activity as a means of fostering educational development and the acquisition of healthy lifestyle habits.

Pedagogical content is a key component in achieving these educational goals. In PE, this is articulated through the development of motor competence (Ruiz, 1995), which, in connection with the notion of motor conduct (Parlebas, 2001), encompasses physical, cognitive, social, and emotional dimensions and translates into contextualized learning. Although SS does not always explicitly incorporate this concept into its organizational frameworks, various educational approaches share objectives aligned with it, such as improving physical fitness and knowledge of sports disciplines; accordingly, several authors support adopting motor competence as a core educational focus in nonformal contexts as well (Fort-Vanmeerhaeghe et al., 2017).

The motor task constitutes the main methodological and assessment resource in physical activity teaching (Torrents et al., 2011; Marqués & Martínez-Santos, 2015), and its structural characteristics shape learning opportunities and

should be aligned with educational objectives (Adé et al., 2022; Posso-Pacheco et al., 2022). From the perspective of motor praxeology, practices are classified according to their internal logic (type of social interaction and environmental uncertainty) into motor action domains, understood as families of tasks that foster the development of different competencies (Parlebas, 2021). Six main domains are identified in school settings: individual, cooperation, opposition, cooperation-opposition, adaptation to the environment, and expression (Larraz, 2004).

Consistent with this conceptual framework, various PE curricula have adopted motor action domains as an organizing principle for content, as they help structure planning and foster a greater diversity of learning experiences (López-Pastor et al., 2016). This perspective, which is also present in the curriculum of the setting examined in this study (the Basque Country), is applicable to SS, where diversifying tasks according to these domains can enrich the educational offering and promote a more balanced motor experience from an educational perspective (Larraz, 2009).

Nevertheless, despite the intentions expressed in regulatory frameworks, actual practice appears to diverge from these approaches. With regard to PE teaching, a performance-centered logic focused on only a few sports persists, restricting motor learning and reducing the educational potential of the subject (Beltrán & Devís, 2019). In SS, competitive approaches predominate, reproducing standardized adult-oriented motor models centered on technical instruction. This situation has prompted the development of alternative motor intervention programs aimed at integrating curricular and extracurricular settings according to principles consistent with regulatory frameworks (Martínez et al., 2019).

Despite the educational relevance of both practice settings, few studies have structurally analyzed the pedagogical approaches underlying PE and SS programs, particularly when both contexts are designed in a coordinated manner. In this regard, analyzing the motor tasks that make up the program plans provides insight into the practice settings offered to students and enables their educational potential to be assessed.

Considering the above, this study aimed to characterize the pedagogical approach of a motor intervention program designed for coordinated implementation in PE and SS within the same educational setting. To this end, within the framework of observational methodology, an indirect observation strategy based on document analysis of the tasks included in the program plans was adopted to identify the structural characteristics of the proposed motor situations. The analysis was conducted both jointly,

assessing the motor experience offered to students as a whole, and separately by setting, with the aim of exploring the potential pedagogical complementarity between the two practice contexts.

Method

Context

This study analyzed two motor intervention programs for primary education students that are implemented in a coordinated manner in the PE and SS settings. Both programs are implemented at a school located in the municipality of Usurbil (Gipuzkoa, Spain): the PE program at Udarregi Ikastola and the SS program known as Zirimara (Martínez et al., 2019). The programs were selected through purposive sampling because they constitute a joint initiative integrating curricular and extracurricular contexts and have been implemented continuously since the 2018–2019 school year. As an indicator of program consolidation, during the 2024–2025 school year, a total of 103 students (68 boys and 35 girls) from the first two cycles of primary education (41 from the first cycle and 62 from the second) participated in the joint PE and SS initiative, representing 67% of the school's students.

With regard to SS, the Zirimara program was designed in 2016 following a process of reflection and assessment carried out by stakeholders from the education and sports sectors (Martínez et al., 2019), with the aim of promoting school sport oriented toward students' holistic development. In this regard, the program moves away from models focused exclusively on competition and seeks to foster both student autonomy and contact with the natural environment.

The instructional proposal analyzed in this study takes the form of an overall program plan for grades one through four of primary education, designed in coordination with the school's own PE program plan. This ensures a coherent and complementary approach across the formal (PE) and nonformal (SS) contexts. For the analysis of the content examined in this study, the 3 890 activities included in the two program plans were coded: 1,948 tasks in PE and 1,942 tasks in SS.

Ethical Considerations

The study did not involve the direct participation of students, nor did it involve the observation or intervention of the

motor tasks implemented. The unit of analysis consisted of the planned tasks included in physical education and school sport curricula, considered as theoretical proposals for tasks to be implemented. Consequently, no data were collected directly from participants, nor was any intervention carried out involving individuals. Therefore, the study was not submitted for review by an ethics committee.

Coding Tool and Procedure

The study was conducted within the framework of observational methodology applied to document analysis, using an indirect observation strategy focused on the tasks included in the instructional program plans. The units of analysis were the planned tasks, which were considered representative of the program's pedagogical approach. This approach makes it possible to analyze the educational potential of the proposal based on the structural characteristics of the motor situations, thus providing a useful tool for evaluating motor intervention programs.

To analyze the activities included in the program plan, an ad hoc taxonomic tool was developed, structured as a combination of field formats and a category system (Anguera, 1992), which made it possible to simultaneously record different structural characteristics of the tasks included in the program plans. On the one hand, it enabled the analysis of practice time management by distinguishing between motor and nonmotor tasks, their density (Echeazarra, 2016), and their distribution throughout the session. On the other hand, it facilitated the identification of characteristics of the internal logic that are relevant from an instructional perspective (López de Sosoaga, 2010), such as action domains, memory, and equipment. Table 1 presents the criteria and categories used to categorize the tasks.

Using the taxonomic tool described above, all activities included in the annual PE and SS program plans were then analyzed. Prior to coding, an interobserver agreement test was conducted between two observers to verify the reliability of those coding criteria that were not explicitly stated in the program plans but could be derived from the structural characteristics of the tasks described in them. Both observers recorded and classified 50 tasks, comparing their results with the final categorization. Cohen's kappa coefficient (Cohen, 1960) and the interpretation scale proposed by Landis and Koch (1977) were used to assess the degree of agreement. Satisfactory values were obtained for all criteria, ranging from .87 to 1.00 (see Table 2).

Table 1*Brief description of the criteria and categories used to code the tasks*

	Criteria	Categories	Description
Contextualization	Context	PE and SS	Context in which the activity takes place
	Grade level	PE1. PE2. PE3. PE4.	Grade for which the activity is intended
	Instructional unit	Name of the unit	Instructional unit corresponding to this activity
	Session No.	Session number	Number of sessions per grade level
	Exercise No.	Exercise number	Number of exercises per grade level
	Exercise	Name of the activity	Name of the activity in the program plan
	Duration	Activity duration	Duration of each activity in minutes
Practice time management	Type of practice	Motor	Motor task
		Nonmotor	Task with no motor involvement
	Density index	Full	≥ 75% of students participate in the activity
		Partial	< 75% of students participate in the activity
	Session phase	Opening	Initial phase for welcoming students and providing explanations
		Main phase	Central phase devoted to learning
		Closing	Final phase for reflection and closing
Characteristics of motor practice	Motor action domains	Psychomotor (P)	Individual actions in a stable space, with no interaction
		Opposition (O)	One-on-one (1:1). Includes all-against-all and one-against-all situations (1:X)
		Cooperation (C)	Motor situation involving cooperation among participants in the absence of opposition
		Cooperation-opposition (CO)	Motor situations in which participants interact simultaneously through cooperative relationships with teammates and oppositional relationships against opponents
		Expressive (E)	Activities with a strongly artistic and expressive nature
		Environmental uncertainty (EU)	Activities involving uncertainty in the environment
	Equipment	Standard	Standard equipment is used
		Alternative	Equipment other than standard equipment is used
		No equipment	No equipment is used
	Memory	With memory	The task identifies the winner(s) upon completion
		Without memory	The task does not determine a winner

Table 2*Results of the interobserver agreement test. Cohen's kappa statistic*

Criteria	Interobserver agreement
Density	.87
Action domain	.98
Equipment	.96
Memory	1

Statistical Analysis

Results were expressed as mean and standard deviation, using relative data to facilitate comparisons between PE and SS, given the differences in planned practice time. Normality and homoscedasticity were assessed using the Shapiro–Wilk and Levene tests, and, based on the results, nonparametric statistics were used.

For the between-context analysis, the Kruskal–Wallis test was applied, followed by Dunn’s post hoc test with Bonferroni correction. For the within-context analyses, the Mann–Whitney *U* test was used for variables with two levels, and the Kruskal–Wallis test with Dunn’s post hoc test was used for variables with more than two levels. The same procedure was used to analyze differences between the two PE cycles. In addition, effect sizes (ES) were calculated using Cohen’s *d* (Cohen, 1988), along with their 95% confidence intervals, and their magnitude was classified as trivial (< .2), small (.2–.5), moderate (.5–.8), or large (> .8) (Cohen, 1988). The analysis was performed using JASP v0.14, with differences considered significant at $p < .05$.

Results

Practice Time Management

With regard to the temporal management of practice, motor

engagement (type of nonmotor and motor practice together with the density of motor practice) is presented on the one hand, and the organization of practice time according to session phase (opening, main phase, and closing), which was in turn categorized as nonmotor or motor, on the other. Table 3 presents data for the practice settings studied, PE and SS, both separately and jointly (Combined), while Table 4 presents the corresponding data for the two PE cycles (PEcycle1 and PEcycle2).

In the comparison between contexts, PE showed significantly higher values than SS for motor practice (0.90 [0.74; 1.06], large) as well as for full-density motor practice (0.41 [0.26; 0.56], small). Regarding session structure, PE showed significantly higher values in the opening (0.15 [–0.03; 0.34], trivial) and closing (0.66 [0.47; 0.84], moderate) phases than SS, whereas SS showed significantly higher values in the main phase (0.84 [0.65; 1.03], large). Finally, SS showed significantly higher values for nonmotor practice during the opening phase than PE (1.85 [2.07; 1.63], large).

In the comparison between PE cycles, PEcycle1 showed significantly higher values than PEcycle2 for motor practice (0.23 [0.06; 0.39], small) and for full-density motor practice (0.50 [0.34; 0.67], moderate). Regarding session structure, the only significant difference was found for motor practice during the opening phase, which was significantly higher in PEcycle1 (0.15 [–0.03; 0.34], trivial).

Table 3

Type of practice (motor and nonmotor, and partial and full density for motor practice) and session phase (motor and nonmotor practice) in the PE and SS contexts

	Type of practice				Session structure			
	Nonmotor	Motor	Opening		Main phase		Closing	
PE	20.3 ± 17.2	79.7 ± 17.2 ^b	24.2 ± 9.4 ^b		59.2 ± 9.8		16.6 ± 4.2 ^b	
	Partial d.		Full d.		Nonmotor		Motor	
	11.9 ± 25.0	88.1 ± 25.0 ^b	53.6 ± 31.5	46.4 ± 31.5 ^b	3.3 ± 12.7	96.7 ± 12.7	100.0 ± 0.0	0.0 ± 0.00
SS	Nonmotor	Motor	Opening		Main phase		Closing	
	34.0 ± 12.6 ^a	66.0 ± 12.6	23.1 ± 3.7		65.6 ± 4.1 ^a		11.3 ± 11.2	
	Partial d.		Full d.		Nonmotor		Motor	
	22.9 ± 28.4 ^a	77.1 ± 28.4	97.1 ± 9.4 ^a	2.9 ± 9.4	3.4 ± 14.3	96.6 ± 14.3	100.0 ± 0.0	0.0 ± 0.00
Combined	Nonmotor	Motor	Opening		Main phase		Closing	
	25.9 ± 16.8	74.1 ± 16.8	23.6 ± 7.2		62.4 ± 8.2		14.0 ± 4.1	
	Partial d.		Full d.		Nonmotor		Motor	
	16.5 ± 27.0	83.5 ± 27.0	75.3 ± 31.8	24.7 ± 31.8	3.3 ± 13.5	96.7 ± 13.5	100.0 ± 0.0	0.0 ± 0.0

Note. Significant differences at $p < .05$: a > PE, b > SS; Partial d. = partial density, Full d. = full density.

Table 4

Type of practice (motor and nonmotor, and partial and full density for motor practice) and session phase (motor and nonmotor practice) in the PEcycle1 and PEcycle2 contexts

Type of practice					Session structure				
PEcycle1	Nonmotor	Motor		Opening		Main phase		Closing	
	18.4 ± 17.4	81.6 ± 17.4 ^b		23.2 ± 10.1		60.5 ± 10.7		16.3 ± 4.0	
		Partial d.	Full d.	Nonmotor	Motor	Nonmotor	Motor	Nonmotor	Motor
	6.1 ± 17.5	93.9 ± 17.5 ^b	51.1 ± 34.1	48.9 ± 34.1 ^b	4.0 ± 13.8	96.0 ± 13.8	100.0 ± 0.0	0.0 ± 0.0	
PEcycle2	Nonmotor	Motor		Opening		Main phase		Closing	
	22.3 ± 16.7 ^a	77.7 ± 16.7		25.0 ± 8.6		58.0 ± 8.7		17.0 ± 4.4	
		Partial d.	Full d.	Nonmotor	Motor	Nonmotor	Motor	Nonmotor	Motor
	18.5 ± 30.1 ^a	81.5 ± 30.1	56.0 ± 28.6 ^a	44.0 ± 28.6	2.6 ± 11.5	97.4 ± 11.5	100.0 ± 0.0	0.0 ± 0.0	

Note. Significant differences at $p < .05$: a > PEcycle1, b > PEcycle2; Partial d. = partial density, Full d. = full density.

Structural Characteristics of Motor Practice

This second section presents the variables related to the structural characteristics that define the motor tasks included in the PE and SS program plans, categorized according to their motor action domain, whether or not they have

memory, and the type of equipment used. As in the previous section, data are presented for the comparison between PE and SS (Table 5), on the one hand, and between PEcycle1 and PEcycle2 (Table 6), on the other. Effect size values are also presented for the comparisons between PE and SS (Figure 1) and between PEcycle1 and PEcycle2 (Figure 2).

Table 5

Classification of motor practice according to action domains, memory, and equipment in the PE and SS contexts

	Action domains						Memory		Equipment		
	P	C	O	CO	EU	E	No	Yes	No	Standard	Alternative
PE	16.7 ± 32.4 ³	20.9 ± 38.2 ^{b35}	6.8 ± 19.9	15.6 ± 30.6 ³	14.2 ± 34.3	25.8 ± 42.4 ^{b35}	85.3 ± 29.2 ^{b2}	14.7 ± 29.2	35.3 ± 42.8 ^{b3}	61.9 ± 43.2 ¹³	2.8 ± 13.5
SS	19.6 ± 28.7 ^{a256}	12.0 ± 21.1	17.1 ± 26.3 ^{a56}	24.3 ± 30.4 ^{a256}	12.2 ± 30.2	14.9 ± 34.0	63.8 ± 33.5 ²	36.2 ± 33.5 ^a	21.4 ± 29.6 ³	73.4 ± 31.6 ^{a13}	5.2 ± 14.6 ^a
Combined	17.9 ± 30.8 ⁵	17.2 ± 32.5 ⁵	11.0 ± 23.3	19.2 ± 30.8 ³⁵	13.4 ± 32.6	23.3 ± 39.5 ⁵	76.5 ± 32.8 ²	23.5 ± 32.8	29.5 ± 38.5 ³	66.7 ± 39.2 ¹³	3.8 ± 14.0

Note. a > PE, b > SS, 1 > P, 2 > C, 3 > O, 4 > CO, 5 > EU, 6 > E, 1 > No, 2 > Yes, 1 > No, 2 > Standard, 3 > Alternative, P = psychomotor, C = cooperation, O = opposition, CO = cooperation-opposition, EU = environmental uncertainty, E = expressive activity.

Table 6

Classification of motor practice according to action domains, memory, and equipment in the PEcycle1 and PEcycle2 contexts

	Action domains						Memory		Equipment		
	P	C	O	CO	EU	E	No	Yes	No	Standard	Alternative
PEcycle1	7.8 ± 20.7	24.5 ± 41.6 ¹³	7.4 ± 21.1	17.0 ± 31.2 ¹³	18.1 ± 38.3	25.2 ± 42.2 ¹³	90.8 ± 22.4 ^{b2}	9.2 ± 22.4	38.0 ± 42.8 ³	58.8 ± 43.3 ¹³	3.3 ± 15.2
PEcycle2	26.6 ± 39.6 ^{a345}	16.9 ± 33.6 ³	6.1 ± 18.5	14.0 ± 29.9	9.9 ± 28.6	26.4 ± 42.7 ²³⁵	79.2 ± 34.3 ²	20.8 ± 34.3 ^a	32.2 ± 42.8 ³	65.5 ± 43.0 ¹³	2.3 ± 11.5

Note. a > PEcycle1, b > PEcycle2, 1 > P, 2 > C, 3 > O, 4 > CO, 5 > EU, 6 > E, 1 > No, 2 > Yes, 1 > No, 2 > Standard, 3 > Alternative, P = psychomotor, C = cooperation, O = opposition, CO = cooperation-opposition, EU = environmental uncertainty, E = expressive activity.

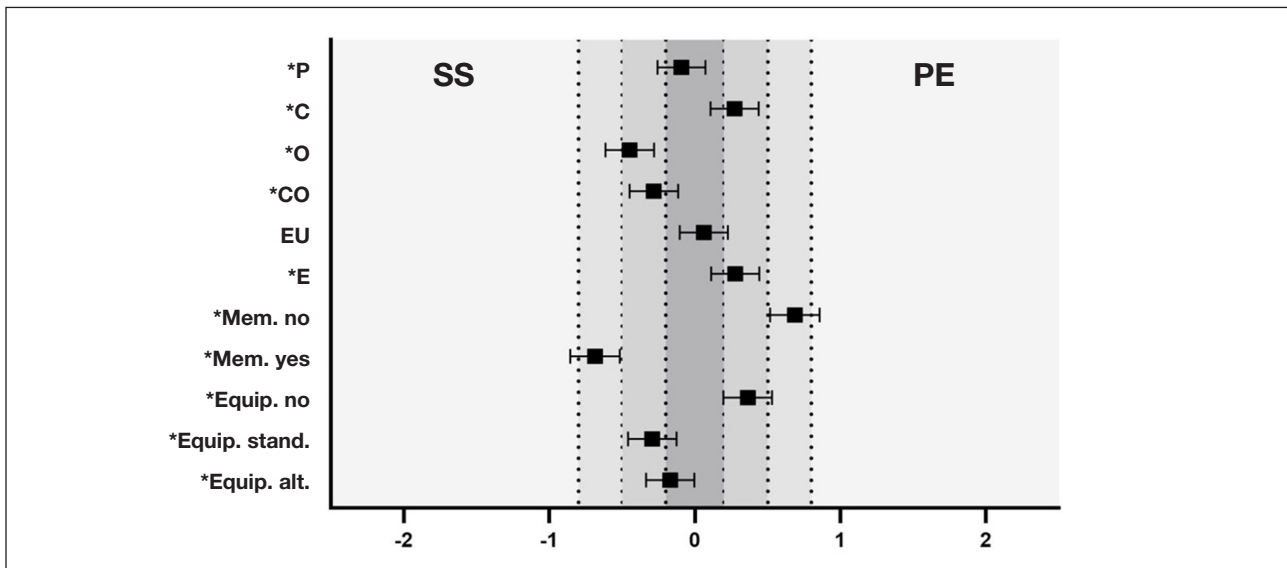
In the comparison between PE and SS, all variables except the EU domain differed significantly between contexts. Specifically, PE showed significantly higher values than SS for C, E, without memory, and no equipment (small, small, moderate, and small ES, respectively). By contrast, P, O, CO, with memory, standard equipment, and alternative equipment showed significantly higher values

in SS than in PE (trivial, small, small, moderate, small, and trivial ES, respectively).

The approaches in PEcycle1 and PEcycle2 appeared more similar, with significant differences in three of the 11 variables. Thus, P and with memory were significantly higher in PEcycle2 (moderate and small ES, respectively), whereas without memory was significantly higher in PEcycle1 (small ES).

Figure 1

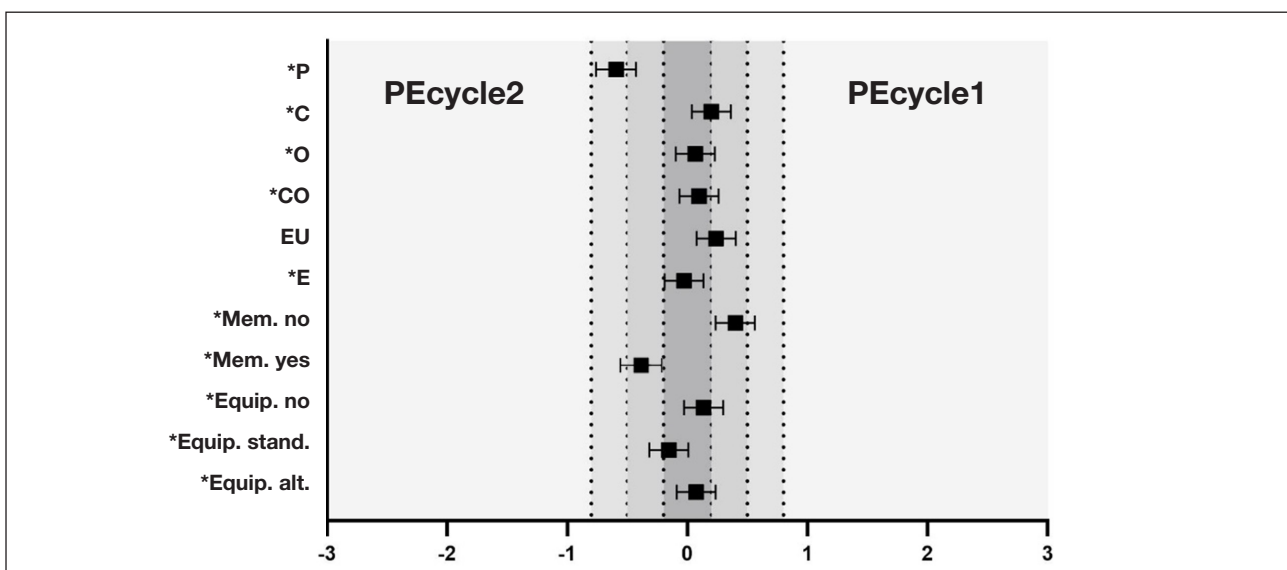
Effect size of the comparison between the PE and SS contexts for each structural task variable



Note. P = psychomotor, C = cooperation, O = opposition, CO = cooperation-opposition, EU = environmental uncertainty, E = expressive activity, Mem. no = activity without memory, Mem. yes = activity with memory, Equip. no = activity without equipment, Equip. stand. = activity with standard equipment, Equip. alt. = activity with alternative equipment.

Figure 2

Effect size of the comparison between the PEcycle1 and PEcycle2 contexts for each structural task variable



Note. P = psychomotor, C = cooperation, O = opposition, CO = cooperation-opposition, EU = environmental uncertainty, E = expressive activity, Mem. no = activity without memory, Mem. yes = activity with memory, Equip. no = activity without equipment, Equip. stand. = activity with standard equipment, Equip. alt. = activity with alternative equipment.

To characterize the approaches in each of the contexts studied in greater detail, mean values for the 11 structural variables were compared within each context, separately for PE and SS. In addition, an integrated analysis of the activities planned for PE and SS (Combined) was also conducted to assess, from an overall perspective, the approach offered to students who participate in both practice contexts.

Beginning with the comparison between action domains, significant differences were found, with a distinct distribution depending on the context analyzed. In PE, the P, C, CO, and E domains showed significantly higher values than O (0.37 [0.21; 0.52], small; 0.46 [0.31; 0.61], small; 0.34 [0.19; 0.49], small; and 0.57 [0.42; 0.72], moderate, respectively), while C and E showed significantly higher values than EU (0.18 [0.03; 0.33], trivial; and 0.30 [0.15; 0.45], small, respectively). In SS, the P, O, and CO domains showed significantly higher values than EU (0.25 [0.06; 0.43], small; 0.17 [0.01; 0.36], small; and 0.40 [0.21; 0.58], small, respectively) and E (0.15 [0.04; 0.33], trivial; 0.07 [-0.11; 0.26], small; and 0.29 [0.10; 0.47], small, respectively), whereas P and CO showed significantly higher values than C (0.30 [0.11; 0.48], small; and 0.47 [0.28; 0.65], small, respectively). Finally, the Combined approach showed fewer significant differences between domains: P, C, CO, and E showed significantly higher values than EU (0.14 [0.03; 0.26], trivial; 0.12 [0.00; 0.23], trivial; 0.18 [0.07; 0.30], trivial; and 0.27 [0.16; 0.39], small, respectively), while CO showed significantly higher values than O (0.30 [0.18; 0.41], small).

Regarding the memory variable, in all three contexts—PE, SS, and Combined—values for tasks without memory were significantly higher than those for tasks with memory (2.39 [2.20; 2.59], large; 0.82 [0.62; 1.01], large; and 1.60 [1.47; 1.73], large, respectively). Finally, in all three contexts (PE, SS, and Combined), values for tasks using standard equipment were significantly higher than those for tasks without equipment (0.61 [0.46; 0.77], moderate; 1.68 [1.47; 1.90], large; and 0.95 [0.83; 1.07], large, respectively) and those using alternative equipment (1.83 [1.65; 2.01], large; 2.74 [2.49; 3.00], large; and 2.12 [1.97; 2.26], large, respectively), while values for tasks without equipment were significantly higher than those for tasks using alternative equipment (1.01 [0.86; 1.17], large; 0.69 [0.50; 0.88], moderate; and 0.88 [0.76; 1.00], large, respectively).

Regarding the approach in each PE cycle, in PEcycle1 the C, CO, and E domains showed significantly higher values than P (0.50 [0.34; 0.67], moderate; 0.34 [0.18; 0.50], small; and 0.52 [0.36; 0.68], moderate, respectively) and O (0.51 [0.35; 0.68], moderate; 0.36 [0.20; 0.52], small; and 0.53 [0.37; 0.69], moderate, respectively). In PEcycle2, P, C, and E showed significantly higher values than O (0.66 [0.49; 0.83], moderate; 0.39 [0.23; 0.56], small; and 0.61 [0.44;

0.78], moderate, respectively), P and E showed significantly higher values than EU (0.48 [0.31; 0.65], small; and 0.45 [0.28; 0.62], small, respectively), P was higher than CO (0.36 [0.19; 0.52], small), and E was higher than C (0.25 [0.08; 0.41], small). As in the other contexts, values for tasks without memory were significantly higher than those for tasks with memory (3.61 [3.35; 3.87], large; and 1.68 [1.49; 1.88], large, respectively), while values for tasks using standard equipment were significantly higher than those for tasks without equipment (0.48 [0.32; 0.64], small; 0.77 [0.60; 0.94], moderate) and those using alternative equipment (1.69 [1.51; 1.88], large; and 1.98 [1.79; 2.19], large, respectively), and values for tasks without equipment were significantly higher than those for tasks using alternative equipment (1.07 [0.90; 1.24], large; and 0.95 [0.77; 1.12], large, respectively).

Discussion

From a methodological perspective, this study provides an indirect observation-based approach to the evaluation of motor intervention programs, using the structural analysis of planned tasks as the unit of analysis. This approach makes it possible to characterize the pedagogical potential of educational proposals without directly observing their implementation, providing a useful tool for the assessment and improvement of educational programs in school settings. The analysis, which examines the overall coherence and complementarity between the settings of a program integrating PE and SS, considers indicators of motor practice time (proportion of motor and nonmotor tasks, density, and temporal distribution) and the structural characteristics of the tasks, including action domains, equipment use, and memory.

Regarding practice time management, the combined analysis reveals an approach that promotes a high level of motor engagement. Three-quarters of the total planned time is devoted to motor practice, amounting to approximately 45 minutes of practice in 60-minute sessions. Given the limited instructional time devoted to motor development, this approach has considerable pedagogical value, as motor practice is fundamental to motor development (Parlebas, 2021). Previous studies have highlighted the low amount of effective practice time in PE, with values below 30% (Yanci et al., 2016). In this study, motor practice time reaches 80% in PE, significantly higher than the 66% observed in SS.

This does not imply that the entire session should consist of motor practice, thereby avoiding the “the more, the better” logic typical of performance-oriented models. An educational approach requires periods of explanation, analysis, and reflection, which are essential for learning (Tinning, 1996). It is therefore necessary to strike a balance that ensures

sufficient practice time without sacrificing nonactive periods that support learning. The program plans analyzed include 25% nonmotor tasks, located mainly in the opening and closing phases, leaving the main phase for motor practice. This organization moves beyond the technical view of “warm-up” and “cool-down,” turning these periods into meaningful pedagogical spaces that together account for 40% of the session.

In the comparison between contexts, PE devotes more time to these phases, possibly because of its curricular nature, although SS also allocates a substantial proportion of time to them, close to one-third of the total. The opening phase in SS is essentially nonmotor, whereas in PE it alternates between motor and nonmotor activities. Particularly in SS, it may be beneficial to incorporate strategies that increase motor engagement from the beginning of the session without compromising the pedagogical approach.

Density is another key variable for ensuring effective practice time, although it is not always taken into account (Echeazarra, 2016). It refers to the participation opportunities afforded by a task: if a task involves waiting or taking turns, it is considered low-density and limits learning. Full-density tasks, which allow simultaneous participation, are therefore more desirable. The program plans analyzed show that more than 80% of the tasks are full-density. PE reaches 88%, compared with 77% in SS, although the effect size is small. Activities such as target games, technical exercises, or relays, which are associated with traditional models (Tinning, 1996), are more common in SS, which explains its lower density.

Regarding motor action domains, the combined approach shows diversity and a balanced distribution, with all domains accounting for at least 10% of the tasks. This is consistent with current motor learning theories, which advocate varied practice to foster balanced development of motor competence (Ruiz, 2020; Parlebas, 2001). Each domain represents a different learning environment, involving different types of interaction with the environment and different motor demands, thereby enriching students' experiences (López-Pastor et al., 2016). The least represented domains are opposition and environmental uncertainty, despite their value in developing motor intelligence (Parlebas, 2001). Opposition tasks foster sociomotor intelligence and the management of rivalry, whereas environmental uncertainty tasks promote more adaptive and flexible motor responses. The latter, which are often associated with activities in natural environments, can also address cross-curricular learning outcomes such as respect for the environment (Sáez-Padilla et al., 2011; Martínez-Santos, 2007), although their implementation is often limited by contextual factors or perceptions of risk (Peñarrubia et al., 2016). Strengthening pedagogical confidence and teacher training may help overcome these barriers.

Although the combined analysis of PE and SS does not show major differences in the distribution of domains, comparisons within each context reveal variations: five of the six domains show significant differences, although most have small or trivial effects. This suggests that the two contexts may be regarded as complementary, thereby enriching students' experiences. PE shows higher percentages of expressive and cooperation tasks, whereas SS places greater emphasis on opposition and cooperation-opposition tasks. The former are well aligned with the PE curriculum, in which body expression is a compulsory component. Devoting one-quarter of the time to these types of tasks therefore appears appropriate. Although they are not compulsory in SS, regulations recommend using PE as a reference. Approaches such as those proposed by Romero-Martín and Arribas (2020), based on cooperative learning, may be useful in both contexts.

Cooperation tasks are key to promoting social values such as cooperation, tolerance, and inclusion (Lavega et al., 2014), and have become increasingly prominent in PE through models such as cooperative learning (Fernández-Río & Méndez-Giménez, 2016). Their inclusion in SS may be equally valuable. However, SS is characterized by a greater emphasis on opposition and cooperation-opposition tasks, which are associated with its more traditional motor culture (Etxebeste, 2013). Even so, more than half of the tasks in SS are noncompetitive, which is particularly relevant for promoting inclusive environments.

Regarding the memory and equipment variables, tasks without memory and tasks using standard equipment predominate. Tasks with memory identify winners and losers, reinforcing the competitive component, whereas tasks without memory encourage participation without pressure associated with making mistakes (Etxebeste et al., 2014). More than 75% of the tasks analyzed are without memory, with a higher proportion in PE (85%) than in SS (64%). This suggests that although SS has a somewhat more competitive orientation, its logic is not centered exclusively on competition, in line with the regulations (Decree 125/2008).

Regarding equipment use, seven out of every 10 minutes of practice involve equipment, predominantly standard equipment. PE includes more tasks without equipment (35% vs. 21% in SS), favoring more expressive and body-centered forms of practice. Alternative or self-constructed equipment is rarely used (5%), although these types of approaches may enrich both PE and SS (Méndez-Giménez et al., 2017).

Finally, the comparison between PE cycles showed no significant differences in most variables. The main difference was found in the second cycle, where psychomotor tasks were more frequent. This is because the first cycle retains psychomotor approaches inspired by early childhood

education, whereas the second introduces activities more focused on motor control, such as manipulation, aiming, and balance.

Conclusions

The structural analysis of planned tasks emerges as a key evaluation strategy for assessing the coherence of the pedagogical approach and the complementarity between PE and SS. The main conclusion of the assessment is the characterization of an innovative coordinated motor intervention approach for the PE and SS settings. When analyzed both jointly and separately, the two program plans constitute a pedagogically relevant project for promoting physical and sports activity and the holistic development of motor competence. They are characterized by: 1) promoting high levels of participation and motor engagement; 2) providing variety and balance across practice settings, fostering both motor and cross-curricular learning; 3) moving away from competitive dynamics while promoting educational attitudes and values; and 4) maintaining alignment and complementarity between PE (more cooperative and expressive) and SS (more sport-oriented and tactical). Understanding the pedagogical effects of planned tasks enables teachers to better align their interventions with educational objectives, and further assessments are needed to deepen the analysis of school-based motor development programs.

The study also has limitations and identifies directions for future research. First, because it focuses on what is planned rather than what is implemented, discrepancies may arise. Teacher training in recording what is actually implemented is proposed to reduce reliance on external observers. Second, the taxonomic system should be enriched with additional variables to improve precision. Third, other indicators should be incorporated, such as the assessment of communication styles using validated tools, together with qualitative techniques (interviews or focus groups) to obtain more in-depth information. In addition, the analysis should be extended to more schools and grade levels to assess the extent to which practices align with the regulatory framework. Finally, future research could complement this approach with direct observation studies to analyze the actual implementation of tasks in practice settings.

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