

APPLICATION OF THE SPORT EDUCATION MODEL IN PHYSICAL EDUCATION: THE CASE OF SPANISH TEACHERS

APLICAÇÃO DO MODELO DE EDUCAÇÃO DESPORTIVA NA EDUCAÇÃO FÍSICA: O CASO DOS PROFESSORES ESPANHÓIS 🔗

APLICACIÓN DEL MODELO DE EDUCACIÓN DEPORTIVA EN EDUCACIÓN FÍSICA: EL CASO DE LOS MAESTROS ESPAÑOLES 🔗

https://doi.org/10.22456/1982-8918.137568

- Diego Arenas* <d.arenas@uib.cat>
- David Gutiérrez** <david.gutierrez@uclm.es>
- Luis Miguel García López** <luismiguel.garcia@uclm.es>
- Josep Vidal-Conti* <josep.vidal@uib.es>
- Adrià Muntaner-Mas* <adria.muntaner@uib.es>

** Universidad de Castilla-La Mancha (UCLM). Cidade-Real, Spain.

Abstract: This study examined the degree of application of Sport Education (SE) and determined whether there were methodological differences among physical education (PE) teachers, who used or did not use SE, in two Spanish regions with different curricular contexts. Using a quantitative approach, 214 primary school PE teachers (129 from Castilla-La Mancha and 85 from Balearic Islands) participated in this study. The findings showed that teachers from Castilla-La Mancha reported a higher degree of application of SE than teachers from Balearic Islands, and significant methodological differences were obtained in the key elements of SE in favor of Castilla-La Mancha teachers (both those who used and those who did not). Therefore, the study thoroughly analyzes how contextual differences in both initial and continuous teacher training might have influenced these results.

Received on: Dec. 12, 2023 Approved on: Jul. 25, 2024 Published in: Sep. 18, 2024



This is an article published in open access under the Creative Commons Attribution 4.0 (CC BY 4.0)

Keywords: Physical Education and Training. Instructional Models. Elementary School.

^{*} Universitat de les Illes Balears (UIB). Palma, Illes Balears, Spain.

1 INTRODUCTION

Traditional educational approaches, such as the direct instruction model, have several limitations when tackling teaching and learning processes in physical education (PE) (Kirk, 2013). One of the most significant limitations is that teaching is based on a teacher-centered approach (Metzler, 2017), which emphasizes PE lessons in the reproduction of isolated movements (out of the context of games) to develop technical proficiency (Gil-Arias et al., 2020; Mitchell; Oslin; Griffin, 2006), obtruding students' autonomy and limiting students' needs (Chu et al., 2022; Rodríguez Macías; Abad Robles; Giménez Fuentes-Guerra, 2021). Over the last few decades, researchers have shed light on alternative pedagogical approaches that could overcome these limitations by improving outcomes related to multiple learning domains — such as physical, affective, and cognitive ---, and enhancing students' holistic development (Evangelio et al., 2022). However, traditional approaches remain hegemonic in PE lessons (Kirk, 2013). In this sense, the priorities and contexts of PE teachers do not coincide with those of the researchers' plans (Harvey et al., 2020). Hence, it is necessary to understand how contextual circumstances hinder or facilitate PE teachers' use of these alternative pedagogical approaches (Casey; Goodyear, 2015).

Pedagogical Models (PM) emerge focusing on student-centered situations based on their needs (Metzler, 2017), overcoming the major limitation of traditional approaches, which are based on the reductionism that has been conducted in the subject (Casey *et al.*, 2021). Additionally, other research suggests that PM — such as sport education (SE) (Bessa *et al.*, 2021), cooperative learning (Casey; Goodyear, 2015), teaching games for understanding (Ortiz *et al.*, 2023), and teaching personal and social responsibility (Pozo; Grao-Cruces; Pérez-Ordás, 2018) — are related to greater efficacy in achieving their goals during PE lessons. Although each PM has specific characteristics and purposes, they share methodological aspects that allow their combination and hybridization (Casey; Macphail, 2018; Metzler, 2017), thereby amplifying their positive effects. These common aspects include the fact that they all start from a theoretical basis that determines their structure, application, teachers' expectations and experiences, students' maturity, the creation of favorable learning environments, and the evaluation process (Hernando-Garijo *et al.*, 2021).

2 THE SPORT EDUCATION MODEL

SE emerges to offer an authentic sport-related experience for students in PE lessons (Siedentop; Hastie; Van Der Mars, 2019). The main goal of this model is to develop literate, competent, and enthusiastic students according to the following six features: seasons, affiliation, formal competition, record keeping, festivity, and culminating event (Siedentop; Hastie; Van Der Mars, 2019). In this sense, some researchers use these features as benchmarks to assess the fidelity of application (Gutiérrez *et al.*, 2022), whereas others prioritize some of them. In line with this, Hastie and Mesquita (2017) suggest four immutable aspects of SE: student roles, extended units, persisting teams, and developing content through small-sided games. Thus, while some researchers recommend following all these features or aspects, PE

teachers adapt to an extent (Fjellner; Varea; Barker, 2024) using a variety of teaching strategies depending on the contextual factors of the learning situation (García López; Kirk, 2022). Despite this, SE is generally defined as a student-centered approach (Hastie; Wallhead, 2016).

Teachers perceive that individual and contextual factors can reduce their fidelity to SE elements. For instance, PE teachers report that initial SE applications mean a greater workload due to the application of PM with a large number of sessions that require planning (Gutiérrez et al., 2020; Pill, 2008). Harvey et al. (2020) suggest several factors that can also be perceived as barriers to its application: (1) pedagogical (e.g., managing and planning the unit); (2) conceptual (e.g., understanding of SE); (3) cultural (e.g., school schedules/facilities in PE); and (4) political constraints (e.g., lack of resources or lack of institutional support in PE). Gutiérrez et al. (2020) conclude that some of the school classes are made up of a reduced number of children and inadequate facilities. Moreover, PE teachers also report a lack of support from institutions in their SE training (Harvey et al., 2020). Previous research studies show that some factors, such as institutional support (Kloeppel et al., 2013), collaborative actions between universities and schools (Casey, 2014), and the creation of SE practice networks (Casey; Macphail, 2018), can maintain higher levels of fidelity to SE elements if collaborative synergies are developed. Furthermore, variables such as teachers' experience and sex should be considered due to their possible influence on the application of SE. More experienced teachers often encounter challenges related to managing the inclusion of roles (Wallhead; O'Sullivan, 2005) and maintaining equity among students (Brock; Rovegno; Oliver, 2009). Regarding teachers' sex, male teachers show higher levels of SE use than female teachers (67.3% against 57.7%) (Gutiérrez et al., 2022).

Teacher socialization experiences provide the backdrop for their curricular and pedagogical decisions, such as adopting PM (Kern et al., 2019). According to the Occupational Socialization Theory (OST) (Richards; Templin; Graber, 2014), PE teachers interpret and deliver SE influenced by their acculturation, professional socialization, and organizational socialization (Curtner-Smith; Hastie; Kinchin, 2008). Based on these influences, PE teachers apply SE in one of three versions: (1) "full version": teachers develop seasons congruent with all SE elements, (2) "watereddown": shorter units based on formal competition but missed elements that can transform traditional units into SE units, and (3) "cafeteria-style": teachers include a few SE elements; hence, traditional units remain. In this sense, a recent crosssectional study based on a sample of 65 experienced PE teachers trained in SE explains the relationship between OST components and the use of SE versions (Vasquez; Wallhead, 2023). The study shows that acculturation does not predict the use of SE, although PE teachers with a teacher orientation are more predisposed to fully implement SE than those with a coaching orientation. Similarly, organizational socialization does not directly predict teachers' version of SE, suggesting that school settings do not present insurmountable barriers. Conversely, professional socialization, shaped by experiences in a PE teacher education (PETE) program, significantly predicts teachers' use of the "full version" of SE. Additionally, another study indicates that professional socialization strongly impacts teachers' adoption of PM compared to those who are not exposed (Malinowski; Kern; Wallhead, 2023).

3 PURPOSE OF THE STUDY

This study considers Casey's (2014) suggestion that it is time for research to focus on the model's finer details, once its viability has been shown. Previous research has indicated that SE is regarded as one of the most attractive PM, primarily due to its structure (Hastie; Mesquita, 2017). Studies conducted in Castilla-La Mancha (CLM), a region of Spain, have demonstrated that SE has been well received by PE teachers (Gutiérrez et al., 2020) and students (Gutierrez et al., 2013). However, the Spanish education system is decentralized, with each region having a significant influence on its students' curriculum and professional development (García-López; Gutiérrez, 2018). Given this context, CLM stands out as the only region in Spain where educational institutions have long recommended the use of PM, such as SE. This long-term commitment contrasts with other Spanish regions, where educational institutions have only recently begun to adopt PM collectively. CLM has introduced SE through PETE programs and fostered synergies between schools and the university, further promoting its application and integration into the educational system (Gutiérrez et al., 2020). Hence, aligning with Hastie and Casey (2014), it is crucial to move beyond focusing solely on the model's content and to advocate for it with a comprehensive understanding of the contextual factors influencing its application. In the specific case of Spain, it is imperative to understand how different curricular contexts may affect the use of SE. To our knowledge, no study has compared SE applications among PE teachers from two regions (or countries). Additionally, differences exist between primary and secondary school curriculum and teacher training in the Spanish education system. Consequently, this study was limited to the primary school stage. It is noteworthy that no study has analyzed SE application in a larger sample of PE teachers at this specific school stage.

Therefore, the main purposes were: 1) to examine the degree of application of SE in two regions of Spain (perceived by PE teachers), and 2) to determine whether there are methodological differences among PE teachers who use or not the SE model in two Spanish regions. The first hypothesis was that the degree of SE application would be higher in CLM than in the Balearic Islands (BI). The second hypothesis was that there would be methodologically significant differences between PE teachers who reported using the model in the two Spanish regions and those who did not.

3.1 METHODS

3.1.1 Study design and participants

This cross-sectional study used data from a sample of Spanish primary school teachers. This study included a sample of 214 PE teachers (71 female and 143 male) from two Spanish regions: BI (38 female and 47 male) and CLM (33 female and 96 male). The mean age of PE teachers was 42.39 (\pm 6.82) years in BI, and 39.67 (\pm

8.23) in CLM. Thus, the mean PE teaching experience was 14.73 (\pm 7.22) years in BI, and 13.91 (\pm 8.14) in CLM. Concerning the type of school, 86.90% were public schools, while 12.10% and 0.90% were charter or private schools, respectively. Data from BI were obtained during the second term of 2022, while CLM data were obtained from a recently published study (Gutiérrez *et al.*, 2022).

In 2022, the Ministry of Education and Vocational Training of Spain promulgated the Decree 157/2022, explicitly suggesting the employment of PM (including SE) in PE. CLM is the only region in Spain that began doing so ten years ago (Decree 54/2014). Additionally, SE has been part of the PETE program at the Universidad de Castilla-La Mancha since 2007 (Gutiérrez *et al.*, 2020), while it has been part of the PETE program at the Universitat de les Illes Balears since 2020.

3.1.2 Procedure

Data from Gutiérrez *et al.* (2022) were used for the CLM region. Data from BI were collected following the procedures established by Gutiérrez *et al.* (2022), using a survey sent to all primary schools (322 at the time of data collection), regardless of their typology (public, charter, or private school). The e-mail addresses of each primary school were obtained from the Spanish Ministry of Education website. Then, an e-mail explaining the purpose of the study was sent to the secretary of each school, and it was requested that the e-mail be forwarded to the PE teachers (a link to the online survey appeared in the e-mail for those who wanted to participate). An online survey was available for four months, and two reminders (to answer it) were sent to the schools. The study was approved by the Universitat de les Illes Balears Ethics Committee (reference number: 252CER22) and abided by the principles set out in the Declaration of Helsinki.

3.1.3 Instruments

Sport education survey. A survey by Gutiérrez et al. (2022) was conducted to determine the application of SE. The survey consisted of three sections. The first section provided information about the goal of the survey, instructions to answer it, and a glossary of specific terms (e.g., modified games, tactical content, technical content). The second section collected the demographic and descriptive data of the PE teachers. The third section consisted of 20 questions about the PE teachers' use of SE (Table 1). If a teacher had not applied SE (Question 1), they answered by considering their experience in all units of games and sports taught. Questions 2 through 19 collected information on two dimensions: features and educational adaptations. SE features were composed of six categories: seasons (Q2, Q3), affiliation (Q4), formal competition (Q6, Q7), culminating event (Q9), record keeping (Q10), and festivity (Q12). Educational adaptations categories were composed of five categories: developmentally appropriate content and competition (Q8), promotion of positive values (Q13, Q16, Q18), promotion of participation (Q5, Q11, Q19), enhanced student responsibility (Q14, Q15, Q17), and extended units (Q20A-D). Question 20 asked the PE teachers to report the extension (lessons) of their units. Except for Question 1 (that was "yes" or "no"), the other questions were rated on a 4-point Likert scale: "never", "occasionally", "often", and "always". In this study, when we referred to "methodological aspects" or "methodological differences," we specifically addressed these two dimensions (features, and educational adaptations).

For the construction of the survey, the authors followed the guidelines of Hernández-Sampieri, Fernández and Baptista (2014): 1) the main objective was defined; 2) key features of SE through a literature review were identified; 3) initial version of the survey to a panel of experts for content validation was sent; 4) panel of experts suggested any change; 5) a second version of the survey was created and submitted again to the panel of experts for ratification.

Table 1 - Survey to PE teachers

Questions

1. Do you use the Sport Education Model for the teaching of sports and games?

2. Throughout the unit, do you plan an initial phase of organization and directed teaching, followed by another in which participatory styles predominate (micro-teaching and reciprocal teaching)?

3. Throughout the unit, do you plan an initial or pre-season phase where students learn sports

content and develop the responsibilities assigned to each of them?

4. Are students grouped into teams that stay together throughout the unit?

5. Do students participate in the team building process?

6. In the unit, are there specific lessons dedicated to competition?

7. In the unit, is a formal competition schedule established and published for the students to see and follow?

8. Is the format of the game used in the competition designed so that there is maximum participation (small games without substitutes)?

9. Is there a culminating event of a festive nature at the end of the unit (celebrations such as an awards ceremony, contests, a banquet, invitations to other members of the educational community, etc.)?

10. Are individual and group performance published on a regular basis (e.g., a league table showing team scores, fair play points, etc.)?

11. Do you incorporate peer evaluations?

12. Do teams have some form of identity? (e.g., name, shirt, colour).

13. Are there formal positive reinforcements (e.g., public assessments, points in the classification, reflections, etc.) for fair play behaviours and sportsmanship?

14. Does each student take upon two roles: one as a player and a second associated with the learning process and/or management of competitions?

15. Are the roles taken by students continuous throughout the unit?

16. Are learning contracts or other means established that allow students to fully understand their responsibilities?

17. Do lessons include activities in which the students carry out their assigned roles?

18. Does the teacher adopt the role of facilitator in interactions with students and encourage them to resolve conflicts within their groups?

19. Are micro-teaching and/or reciprocal teaching used as the usual teaching style?

20. The unit lasts: ·Less than 7 lessons · From 7 to 10 lessons · From 11 to 14 lessons · More than 14 lessons

Note. This survey was developed by Gutiérrez et al. (2022).

3.1.4 Statistical Analyses

Descriptive statistics (means, standard deviations, and percentages) were obtained to examine the teachers' demographic and methodological characteristics. The Kolmogorov-Smirnov and Levene tests were used to test the normality of the data and the homogeneity of variances, respectively. Analyses of covariances (ANCOVAs) were used to determine methodologically significant differences among those who reported using or not the SE model comparing PE teachers from two Spanish regions, with their sex and experience as covariables. The effect size for the ANCOVAs was determined using partial eta squared (n_p^2) (Richardson, 2011). All analyses were conducted using the software IBM SPSS version 27.0. The level of significance was set at $p \le 0.05$.

4 RESULTS

4.1 DEMOGRAPHIC CHARACTERISTICS

Table 2 shows the demographic characteristics of participants. Descriptivestatistics (mean, standard deviation, frequency, and percentages) were used to definethe teachers' sex, age, teaching experience, and school typology.

	All sample	BI	CLM					
Sample N (%)								
Female	71 (33.18)	38 (44.71)	33 (25.58)					
Male	143 (66.82)	47 (55.29)	96 (74.42)					
Total sample	214	85	129					
Age (years)	40.75 (± 7.80)	42.39 (± 6.82)	39.67 (± 8.23)					
Teaching experience (years)	14.23 (± 7.78)	14.73 (± 7.22)	13.91 (± 8.14)					
School typology (%)								
Public	86.90	80.0	91.50					
Charter	12.10	18.80	7.80					
Private	0.90	1.20	0.80					

Table 2 - Demographic characteristics of PE teachers (n= 214)

PE, physical education; %, percentage; SD, standard deviation; N, number of the sample; BI, Balearic Islands; CLM, Castilla-La Mancha.

Source: Authors

4.2 DEGREE OF APPLICATION OF SE IN TWO SPANISH REGIONS

Of the 214 PE teachers who completed the survey, 56.54% indicated using SE in PE lessons. Comparing regions, 62.8% of PE teachers from CLM reported using SE, compared to 47.1% of PE teachers from BI. Concerning gender, 52.11% of the females reported using SE, compared to 58.74% of the males. Splitting by region, 66.67% and 42.55% of the males from CLM and BI reported using SE, respectively. Instead, 51.52% and 52.63% of the females from CLM and BI indicated using SE, respectively. Depending on experience (years), 55.44% of PE teachers with more than 15 years of experience reported using SE, compared to 57.38% of PE teachers

with less than or equal to 15 years of experience. Splitting by region, 68.0% and 40.48% of the PE teachers with more than 15 years of experience, from CLM and BI, respectively, indicated using SE in comparison to 59.49% and 53.49%, following the same order above, with less than or equal to 15 years of experience.

4.3 COMPARISON OF TEACHERS FROM CLM AND BI WHO REPORTED USING SE

Table 3 shows the methodological differences among PE teachers who reported using SE from CLM and BI. The results of the one-way ANCOVA on the average obtained in each category showed that PE teachers from CLM reported significantly greater application of all these categories in their instruction: affiliation $(F_{1, 120} = 5.31; p = 0.023; n_p^2 = 0.043)$, formal competition $(F_{1, 120} = 13.70; p = <0.001; n_p^2 = 0.105)$, culminating event (F1, 120 = 12.06; p = <0.001; $n_p^2 = 0.093$), record keeping $(F_{1, 120} = 20.99; p = <0.001; n_p^2 = 0.152)$, extended units -between 11 and 14 lessons- $(F_{1, 120} = 21.84; p = <0.001; n_p^2 = 0.135)$. With respect to extended units -less than seven lessons- $(F_{1, 120} = 19.05; p = <0.001; n_p^2 = 0.14)$, PE teachers from BI reported significantly greater application. Medium to large effect sizes were obtained in these categories.

Categories	Questions	BI (n = 40)	CLM (n = 81)	F	p	n ² p
		Mean ± SD	Mean ± SD			
Season	Q2; Q3	2.86 ± 0.67	2.99 ± 0.64	1.80	0.182	0.015
Affiliation	Q4	1.68 ± 0.86	2.11 ± 1.18	5.31	0.023*	0.043
Formal competition	Q6; Q7	1.92 ± 0.53	2.48 ± 0.83	13.70	<0.001*	0.105
Culminating event	Q9	1.58 ± 0.87	2.25 ± 1.03	12.06	<0.001*	0.093
Record keeping	Q10	1.38 ±0.74	2.20 ± 1.02	20.99	<.0.001*	0.152
Festivity	Q12	3.23 ±0.80	3.03 ± 0.95	0.40	0.530	0.003
Developmentally appropriate content and competition	Q8	3.49 ±0.79	3.64 ± 0.54	1.27	0.262	0.011
Promotion of positive values	Q13; Q16; Q18	3.01 ±0.47	3.12 ± 0.50	2.47	0.119	0.021
Promotion of participation	Q5; Q11; Q19	2.79 ±0.45	2.82 ± 0.47	0.52	0.474	0.004
Enhanced students' responsibility	Q14; Q15; Q17	2.41 ±0.63	2.60 ± 0.80	2.55	0.113	0.021
Extended units	Q20A	2.43 ±0.81	1.78 ± 0.85	19.05	<0.001*	0.140
(lessons)	Q20B	2.67 ±0.83	2.49 ± 0.88	1.90	0.171	0.016
	Q20C	1.45 ±0.55	2.19 ± 0.91	21.84	<0.001*	0.157
	Q20D	1.03 ±0.16	1.62 ± 0.86	18.22	<0.001*	0.135

 Table 3 - Methodological differences among teachers from different regions of Spain who reported using the SE model.

BI, Balearic Islands; CLM, Castilla-La Mancha; SE, Sport Education; SD, standard deviations; N, number of the

sample.

*Significant differences between regions ($P \le 0.05$)

The scores ranged from 1 = "never" to 4 = "always".

Analyses were adjusted by sex and teaching experience (years).

4.4 COMPARISON OF TEACHERS FROM CLM AND BI WHO REPORTED NOT USING SE

Table 4 shows the methodological differences among PE teachers who reported not using SE, from CLM and BI. The results of the one-way ANCOVA on the average obtained in each category showed that PE teachers from CLM reported significantly greater application of all these categories in their instruction: formal competition ($F_{1, 92} = 8.81$; p = 0.004; $n_p^2 = 0.090$), culminating event ($F_{1, 92} = 13.60$; p = <0.001; $n_p^2 = 0.133$), record keeping ($F_{1, 92} = 10.18$; p = 0.002; $n_p^2 = 0.103$), extended units -between 11 AND 14 lessons- ($F_{1, 92} = 16.58$; p = <0.001; $n_p^2 = 0.157$), and extended units -more than 14 lessons- ($F_{1, 92} = 5.09$; p = 0.027; $n_p^2 = 0.054$). Concerning extended units -less than seven lessons- ($F_{1, 92} = 23.89$; p = <0.001; $n_p^2 = 0.212$), PE teachers from BI showed significantly greater application. Medium to large effect sizes were obtained in these categories.

Categories	Questions .	BI (n = 40)	CLM (n = 81)	F	p	n² _p
		Mean ± SD	Mean ± SD			
Season	Q2; Q3	2.86 ± 0.67	2.99 ± 0.64	1.80	0.182	0.015
Affiliation	Q4	1.68 ± 0.86	2.11 ± 1.18	5.31	0.023*	0.043
Formal competition	Q6; Q7	1.92 ± 0.53	2.48 ± 0.83	13.70	<0.001*	0.105
Culminating event	Q9	1.58 ± 0.87	2.25 ± 1.03	12.06	<0.001*	0.093
Record keeping	Q10	1.38 ±0.74	2.20 ± 1.02	20.99	<.0.001*	0.152
Festivity	Q12	3.23 ±0.80	3.03 ± 0.95	0.40	0.530	0.003
Developmentally appropriate content and competition	Q8	3.49 ±0.79	3.64 ± 0.54	1.27	0.262	0.011
Promotion of positive values	Q13; Q16; Q18	3.01 ±0.47	3.12 ± 0.50	2.47	0.119	0.021
Promotion of participation	Q5; Q11; Q19	2.79 ±0.45	2.82 ± 0.47	0.52	0.474	0.004
Enhanced students' responsibility	Q14; Q15; Q17	2.41 ±0.63	2.60 ± 0.80	2.55	0.113	0.021
Extended units (lessons)	Q20A	2.43 ±0.81	1.78 ± 0.85	19.05	<0.001*	0.140
	Q20B	2.67 ±0.83	2.49 ± 0.88	1.90	0.171	0.016
	Q20C	1.45 ±0.55	2.19 ± 0.91	21.84	<0.001*	0.157
	Q20D	1.03 ±0.16	1.62 ± 0.86	18.22	<0.001*	0.135

 Table 4 - Methodological differences among teachers from different regions of Spain who reported not using the SE model

BI, Balearic Islands; CLM, Castilla-La Mancha; SE, sport education; Other, other methodology; SD, standard deviations; N, number of the sample.

*Significant differences between regions ($P \le 0.05$).

The scores ranged from 1 = "never" to 4 = "always".

Analyses were adjusted by sex and teaching experience (years).

5 DISCUSSION

The primary goals of this study were to examine the degree of application (perceived by PE teachers) of SE between two Spanish regions and to determine whether there are methodologically significant differences between PE teachers from two Spanish regions who reported using SE, and those who did not. The findings revealed that PE teachers from CLM reported a higher degree of application than PE teachers from BI, with significant disparities between the two groups (both who reported using and not using SE). These results were supported by medium to large effect sizes, which showed that teachers' regions (independent variable) were determinants of these SE applications (dependent variable).

Our results confirmed the hypothesis that the degree of SE application is higher in CLM than in BI. Overall, the data showed that SE was widely applied by most PE teachers from CLM, while BI did not reach half. These results can be understood within the framework of professional socialization, which has been shown to influence the use of SE by PE teachers strongly (Malinowski; Kern; Wallhead, 2023). In this context. SE has been part of the PETE program at the Universidad de Castilla-La Mancha since 2007 (Gutiérrez et al., 2020), while it was only incorporated into the Universitat de les Illes Balears program 13 years later. Additionally, a recent study showed that national and regional governments, which have greater control over the curriculum, made decisions that have hampered the growth and training of PE teachers using this model (Wallhead et al., 2021). Harvey et al. (2020) pointed out that one of the most challenging and limiting aspects of adopting PM (including SE) as viewed by teachers is the lack of institutional support in PE programs. Specifically, PE teachers expressed concerns about not being introduced to SE throughout their teacher training as well as a lack of institutional support for their ongoing professional development in SE (Harvey et al., 2020).

Goodyear, Parker and Casey (2019) highlighted the lack of opportunities for PE teachers to learn or continue learning this model. For this reason, the lack of institutional support that PE teachers (and PE teachers in training) from BI received compared to those (and PE teachers in training) from CLM may explain the degree of application in each region. Furthermore, according to Gutiérrez *et al.* (2020), some specific measures could have helped promote the development of SE in CLM: a) integrating SE into the Healthy School Projects (HSP), proposing the inclusion of this model in teacher development programs, and b) promoting the creation of SE school networks. On the contrary, in BI (at any educational stage) no initiative is currently applied to prolong SE training beyond the university context. In this context, some studies showed the importance that PE teachers give to continuous training to keep learning SE with increased levels of fidelity in the model (Goodyear; Parker; Casey, 2019; Hastie; Ward; Brock, 2017).

Additionally, our second hypothesis was also confirmed. Regarding the teachers who reported using SE, PE teachers from these two regions showed significant differences in four out of six key elements of SE established by Siedentop *et al.* (2019): affiliation, formal competition, culminating event, and record keeping. In addition, one of the immutable aspects of SE (Hastie; Mesquita, 2017): extended units (less than 7, 11 to 14, and more than 14). Before examining the methodological (significant) differences between PE teachers of one location and another, it should be noted that in the Spanish context, units are usually between 6-8 lessons at most (Gutiérrez *et al.*, 2022). According to this fact, PE teachers from the BI reported significantly higher levels of programming units with less than 7 lessons. This is in contrast to PE teachers

from CLM who reported significantly higher levels of programming units with 11 to 14 lessons, and more than 14 lessons (thus, showing a greater degree of fidelity towards SE). Academics believe that PE teachers' resistance to use SE is derived from their resistance to conducting extended units, because of their lack of knowledge about the model (Wallhead et al., 2021). Casey (2014) pointed out that this resistance could be influenced by their persistence on traditional approaches. MacPhail, Kirk and Kinchin (2004) suggested that for the social and affective development of affiliation, it is necessary to develop extended units (<14 lessons). Otherwise, PE teachers reported success in developing culminating events because students increased their interest and enthusiasm (Kinchin; Macphail; Ni Chroinin, 2009). However, the same authors also suggested that the development of culminating events must be accompanied by other key elements of the model, such as formal competition, and record keeping (Kinchin; Macphail; Ni Chroinin, 2009). In terms of the OST (Richards; Pennington; Sinelnikov, 2019), adopting a more comprehensive version of SE could be attributed to the professional socialization of PE teachers (Vasquez; Wallhead, 2023), which significantly predicts their "full" usage. As previously mentioned, SE was integrated into the PETE program in CLM 13 years before it was introduced in BI.

Concerning those teachers who reported not using SE, PE teachers from CLM and BI continued to obtain significant differences in the following key elements of SE (Siedentop; Hastie; Van Der Mars, 2019): formal competition, culminating event, and record keeping. In addition, one of the immutable aspects of SE (Hastie; Mesquita, 2017): extended units (less than 7, 11 to 14, and more than 14). Therefore, in contrast to the results of PE teachers who reported using SE, the same categories showed significant differences excluding affiliation. Even though both regions start from a similar initial training and curriculum starting point at present, PE teachers (who reported not using SE) from BI continue showing significantly lower levels in those key elements of SE compared to CLM teachers.

Greater compliance with SE elements by PE teachers from CLM can also be justified under the umbrella of the OST, which has a great impact on the way PE teachers learn and teach in PE (Richards; Pennington; Sinelnikov, 2019; Richards; Templin; Graber, 2014). The earlier introduction of teaching SE in CLM (13 years compared to BI) through the PETE program, which fosters professional socialization, and the earlier curriculum support (8 years ahead of BI) provided to PE teachers upon entering schools, influencing organizational socialization, have shaped learning and teaching practices in CLM. Similarly, this has been favored by institutional support from the CLM administration to include SE in HSP and promote the creation of SE school networks (Gutiérrez *et al.*, 2020).

The present study has some limitations. Firstly, while these results could be generalized to the use of SE in the two exposed regions, they are not representative of the entire country (Spain). Secondly, although reference has been made to the continued superiority of the fidelity of SE elements by PE teachers from CLM, their results cannot be held as a reference to the appropriate levels of application of SE elements. Finally, as Gutiérrez *et al.* (2022) showed, this survey did not take into account previous knowledge about SE.

6 CONCLUSION

Overall, SE showed higher degrees of application in CLM than in BI in primary school. Furthermore, there were methodologically significant differences in some key elements of SE among PE teachers from CLM and BI (both among those who reported using the model and those who reported the opposite). In these significant differences, PE teachers from CLM always showed higher levels of fidelity to SE than PE teachers from BI. According to previous literature (Malinowski; Kern; Wallhead, 2023; Vasquez; Wallhead, 2023), these results can be mainly attributed to the substantial influence that PETE programs have on teachers' learning. Likewise, findings from the present study could help to show the importance of institutional support in the training and development of SE. This institutional support should be based not only on initial training (together with the curriculum support of the content) but also on professional development, with active collaboration between universities and schools. In line with this, favoring a greater degree of knowledge of SE and favoring a more specific understanding of the model leads to a greater degree of fidelity in the elements that compose it. In fact, knowledge is transferred in such a way that it influences the teaching of PE teachers who reported not using the model.

We propose collecting data on why teachers exhibit fidelity in certain components of the model, considering their local context, as future areas of research. In this sense, it would be useful to see how initial university training affects PE teachers, as well as ongoing training (after university studies are completed) in SE expertise. Finally, it would be interesting to learn more about the model's degree of application in other locations to gain more generalizable results for this country. All this would contribute to a more complete understanding of the state of SE.

REFERENCES

BESSA, Cristiana *et al.* What actually differs between traditional teaching and sport education in students' learning outcomes? A critical systematic review. **Journal of Sports Science & Medicine**, v. 20, p. 110–125, 2021. DOI: <u>https://doi.org/10.52082/jssm.2021.110</u>

BROCK, Sheri; ROVEGNO, Inez; OLIVER, Kimberly. The influence of student status on student interactions and experiences during a sport education unit. **Physical Education and Sport Pedagogy**, v. 14, n. 4, p. 355–375, 2009. DOI: <u>https://doi.org/10.1080/17408980802400494</u>

CASEY, Ashley *et al.* Between hope and happening: problematizing the M and the P in models-based practice. **Physical Education and Sport Pedagogy**, v. 26, n. 2, p. 111–122, 2021. DOI: <u>https://doi.org/10.1080/17408989.2020.1789576</u>

CASEY, Ashley. Models-based practice: great white hope or white elephant? **Physical Education and Sport Pedagogy**, v. 19, n. 1, p. 18–34, 2014. DOI: <u>https://doi.org/10.1080/1</u> 7408989.2012.726977

CASEY, Ashley; GOODYEAR, Victoria. Can cooperative learning achieve the four learning outcomes of Physical Education? A review of literature. **Quest**, v. 67, n. 1, p. 56–72, 2015. DOI: <u>https://doi.org/10.1080/00336297.2014.984733</u>

CASEY, Ashley; MACPHAIL, Ann. Adopting a models-based approach to teaching Physical Education. **Physical Education and Sport Pedagogy**, v. 23, n. 3, p. 294–310, 2018. DOI: <u>https://doi.org/10.1080/17408989.2018.1429588</u>

CHU, Yongchao *et al.* The effect of education model in Physical Education on student learning behavior. **Frontiers in Psychology**, v. 13, 2022. DOI: <u>https://doi.org/10.3389/</u> <u>fpsyg.2022.944507</u>

CURTNER-SMITH, Matthew; HASTIE, Peter; KINCHIN, Gary. Influence of occupational socialization on beginning teachers' interpretation and delivery of sport education. **Sport, Education and Society**, v. 13, n. 1, p. 97–117, 2008. DOI: <u>http://dx.doi.org/10.1080/13573320701780779</u>

EVANGELIO, Carlos *et al.* Students' perceptions on three-way pedagogical models hybridization: contributing to the development of active identities. **Sport, Education and Society**, v. 27, n. 6, p. 717–731, 2022. DOI: <u>https://doi.org/10.1080/13573322.2021.1907327</u>

FJELLNER, Robin Lindgren; VAREA, Varea; BARKER, Dean. How physical education teachers are positioned in models scholarship: a scoping review. **Physical Education and Sport Pedagogy**, v. 29, n. 4, p. 329-345, 2024. DOI: <u>https://doi.org/10.1080/17408989.2022</u>.2083098

GARCÍA-LÓPEZ, Luis Miguel; GUTIÉRREZ, David. Primary physical education in Spain. *In:* GRIGGS, Gerald; PETRIE, Kirsten (ed.). **Routledge handbook of primary Physical Education**. New York: Routledge, 2018. p. 285–296. DOI: <u>https://doi.org/10.4324/9781315545257</u>.

GARCÍA-LÓPEZ, Luis Miguel; KIRK, David. Empowering children from socially vulnerable backgrounds through the use of roles in sport education. **Sport, Education and Society**, v. 27, n. 6, p. 676–688, 2022. DOI: <u>https://doi.org/10.1080/13573322.2021.1897563</u>

GIL-ARIAS, Alexander *et al.* Autonomy support, motivational climate, enjoyment and perceived competence in physical education: Impact of a hybrid teaching games for understanding/sport education unit. **European Physical Education Review**, v. 26, n. 1, p. 36–53, 2020. DOI: <u>https://doi.org/10.1177/1356336X18816997</u>

GOODYEAR, Victoria; PARKER, Melissa; CASEY, Ashley. Social media and teacher professional learning communities. **Physical Education and Sport Pedagogy**, v. 24, n. 5, p. 421–433, 2019. DOI: <u>https://doi.org/10.1080/17408989.2019.1617263</u>

GUTIÉRREZ, David *et al.* Adoption and fidelity of Sport Education in Spanish schools. **European Physical Education Review**, v. 28, n. 1, p. 244–262, 2022. DOI: <u>https://doi.org/10.1177/1356336X211036066</u>

GUTIÉRREZ, David *et al.* Evaluation of a program to expand use of sport education model: teachers' perception and experience. **Journal of Human Sport and Exercise**, v. 15, n. proc2, p. S345-S358, 2020. DOI: <u>https://doi.org/10.14198/jhse.2020.15.Proc2.26</u>

GUTIERREZ, David *et al.* The responses of Spanish students' to participation in seasons of sport education. **The Global Journal of Health and Physical Education Pedagogy**, v. 2, n. 2, p. 111–127, 2013. Available at: https://www.researchgate.net/publication/259581843 The responses of Spanish students' to participation in seasons of sport education. Accessed: Nov. 21, 2023.

HARVEY, Stephen *et al.* Physical education teachers' perceptions of the successes, constraints, and possibilities associated with implementing the sport education model. **Physical Education and Sport Pedagogy**, v. 25, n. 5, p. 555–566, 2020. DOI: <u>https://doi.org/10.1080/17408989.2020.1752650</u>

HASTIE, Peter; CASEY, Ashley. Fidelity in models-based practice research in sport pedagogy: a guide for future investigations. **Journal of Teaching in Physical Education**, v. 33, n. 3, p. 422–431, 2014. DOI: <u>http://dx.doi.org/10.1123/jtpe.2013-0141</u>

HASTIE, Peter; MESQUITA, Isabel. Sport-based physical education. *In:* ENNIS, Catherine (ed.). **Routledge Handbook of Physical Education Pedagogies**. London: Routledge, 2017. p. 68–84.

HASTIE, Peter; WALLHEAD, Tristan. Models-based practice in Physical Education: the case for Sport Education. **Journal of Teaching in Physical Education**, v. 35, n. 4, p. 390–399, 2016. DOI: <u>https://doi.org/10.1123/jtpe.2016-0092</u>

HASTIE, Peter; WARD, Jeffrey; BROCK, Sheri. Effect of graded competition on student opportunities for participation and success rates during a season of sport education. **Physical Education and Sport Pedagogy**, v. 22, n. 3, p. 316–327, 2017. DOI: <u>https://doi.org/10.1080/17408989.2016.1203888</u>

HERNÁNDEZ-SAMPIERI, Roberto; FERNÁNDEZ, Carlos; BAPTISTA, Pilar. **Metodología de la Investigación** (Research Methodology Fundamentals). Madrid: McGraw-Hill, 2014.

HERNANDO-GARIJO, Alejandra *et al.* Fundamental pedagogical aspects for the implementation of models-based practice in Physical Education. **International Journal of Environmental Research and Public Health**, v. 18, n. 13, p. 7152, 2021. DOI: <u>https://doi.org/10.3390/ijerph18137152</u>

KERN, Ben *et al.* The Influence of Socializing Agents and Teaching Context Among Teachers of Different Dispositions Toward Change. **Journal of Teaching in Physical Education**, v. 38, n. 3, p. 252–261, 2019. DOI: <u>https://doi.org/10.1123/jtpe.2018-0175</u>

KINCHIN, Gary; MACPHAIL, Ann; NI CHROININ, Deirdre. Pupils' and teachers' perceptions of a culminating festival within a sport education season in Irish primary schools. **Physical Education & Sport Pedagogy**, v. 14, n. 4, p. 391–406, 2009. DOI: <u>https://doi.org/10.1080/17408980802584982</u>

KIRK, David. Educational value and models-based practice in Physical Education. **Educational Philosophy and Theory**, v. 45, n. 9, p. 973–986, 2013. DOI: <u>https://doi.org/10.1080/00131857.2013.785352</u>

KLOEPPEL, Tiffany *et al.* Teacher fidelity to one physical education curricular model. **Journal of Teaching in Physical Education**, v. 32, n. 2, p. 186–204, 2013. DOI: <u>https://doi.org/10.1123/jtpe.32.2.186</u>

MACPHAIL, Ann; KIRK, David; KINCHIN, Gary. Sport Education: promoting team affiliation through Physical Education. **Journal of Teaching in Physical Education**, v. 23, n. 2, p. 106–122, 2004. DOI: <u>https://doi.org/10.1123/jtpe.23.2.106</u>

MALINOWSKI, Paul; KERN, Ben; WALLHEAD, Tristan. Adopting Instructional Models in Physical Education: The Influence of Occupational Socialization. **Journal of Teaching in Physical Education**, v. 43, n. 1, p. 93–101, 2023. DOI: <u>https://doi.org/10.1123/jtpe.2022-0142</u>

METZLER, Michael. Instructional Models in Physical Education. 3. ed. New York: Routledge, 2017.

MITCHELL, Stephen; OSLIN, Judith; GRIFFIN, Linda. **Teaching sport concepts and skills**: a tactical games approach. 2. ed. Champaign, IL: Human Kinetics, 2006.

ORTIZ, Lourdes Meroño. *et al.* Teaching games for understanding in game performance and psychosocial variables: systematic review and meta-analysis of randomized control trial. **Children** (Basel, Switzerland), v. 10, n. 3, p. 573, 2023. DOI: <u>https://doi.org/10.3390/</u> children10030573

PILL, Shane. A teachers' perceptions of the Sport Education model as an alternative for upper primary school physical education. **ACHPER Healthy Lifestyles Journal**, v. 55, n. 2/3, p. 23–29, 2008. Available at: <u>https://www.researchgate.net/publication/274639186_A_teachers'_perceptions_of_the_Sport_Education_model_as_an_alternative_for_upper_primary_school_physical_education</u>. Accessed: Oct. 10, 2023.

POZO, Pablo; GRAO-CRUCES, Alberto; PÉREZ-ORDÁS, Raquel. Teaching personal and social responsibility model-based programmes in Physical Education: a systematic review. **European Physical Education Review**, v. 24, n. 1, p. 56–75, 2018. DOI: <u>https://doi.org/10.1177/1356336X16664749</u>

RICHARDS, Andrew; PENNINGTON, Colin; SINELNIKOV, Oleg. Teacher socialization in Physical Education: a scoping review of literature. **Kinesiology Review**, v. 8, n. 2, p. 86–99, 2019. DOI: <u>https://doi.org/10.1123/kr.2018-0003</u>

RICHARDS, Andrew; TEMPLIN, Thomas; GRABER, Kim. The socialization of teachers in Physical Education: review and recommendations for future works. **Kinesiology Review**, v. 3, n. 2, p. 113–134, 2014. DOI: <u>https://doi.org/10.1123/kr.2013-0006</u>

RICHARDSON, John. Eta squared and partial eta squared as measures of effect size in educational research. **Educational Research Review**, v. 6, n. 2, p. 135–147, 2011. DOI: <u>https://doi.org/10.1016/j.edurev.2010.12.001</u>

RODRÍGUEZ MACÍAS, Manuel; ABAD ROBLES, Manuel. Tomás; GIMÉNEZ FUENTES-GUERRA, Francisco Javier. Effects of sport teaching on students' enjoyment and fun: a systematic review and meta-analysis. **Frontiers in Psychology**, v. 12, p. 708155, 2021. DOI: <u>https://doi.org/10.3389/fpsyg.2021.708155</u>

SIEDENTOP, Daryl; HASTIE, Peter; VAN DER MARS, Hans. **Complete guide to Sport Education**. 3. ed. Champaign, IL: Human Kinetics, 2019.

VASQUEZ, Martin; WALLHEAD, Tristan. The relationship between occupational socialization factors and in-service physical educators' reported use of sport education. **European Physical Education Review**, v. 29, n. 2, p. 286–307, 2023. DOI: <u>https://doi.org/10.1177/1356336X221135169</u>

WALLHEAD, Tristan *et al.* Academics' perspectives on the future of Sport Education. **Physical Education and Sport Pedagogy**, v. 26, n. 5, p. 533–548, 2021. DOI: <u>https://doi.org/10.1080/17408989.2020.1823960</u>

WALLHEAD, Tristan; O'SULLIVAN, Mary. Sport Education: physical education for the new millennium? **Physical Education and Sport Pedagogy**, v. 10, n. 2, p. 181–210, 2005. DOI: <u>https://doi.org/10.1080/17408980500105098</u>



Resumo: Este estudo examinou o grau de aplicação da Educação Desportiva (ED) e determinou se existiam diferenças metodológicas entre professores de Educação Física (EF), que utilizavam ou não a ED, em duas regiões espanholas com contextos curriculares diferentes. A partir de uma abordagem quantitativa, participaram neste estudo 214 professores de EF do Ensino Primário (129 de Castila-La-mancha e 85 das Ilhas Baleares). Os resultados mostraram que os professores de Castila-La-mancha relataram um maior grau de aplicação da ED, e diferenças metodológicas significativas foram obtidas nos elementos-chave da ED a favor dos professores de Castila-La-mancha (tanto os que usaram como os que não o fizeram). Portanto, o estudo analisa minuciosamente como as diferenças contextuais na formação inicial e contínua de professores podem ter influenciado esses resultados.

Palavras-chave: Educação Física e Formação. Modelos Educacionais. Educação Básica.

Resumen: Este estudio examinó el grado de aplicación de la Educación Deportiva (ED) y determinó si existían diferencias metodológicas entre los maestros de Educación Física (EF), que utilizaban o no la ED, en dos regiones españolas con contextos curriculares diferentes. Desde un enfoque cuantitativo, en este estudio participaron 214 maestros de EF de Educación Primaria (129 de Castilla-La Mancha y 85 de Baleares). Los resultados mostraron que el profesorado de Castilla-La Mancha reportaba un mayor grado de aplicación de la ED, y se obtuvieron diferencias metodológicas significativas en los elementos clave de la ED a favor de los profesores de Castilla-La Mancha (tanto los que usaban como los que no lo hicieron). Por tanto, el estudio analiza en profundidad cómo las diferencias contextuales en la formación docente tanto inicial como continua podrían haber influido en estos resultados.

Palabras clave: Educación y Entrenamiento Físico. Modelos Educacionales. Educación Primaria.



USE LICENSE

This article is published as Open Access under the Creative Commons Attribution 4.0 International (CC BY 4.0) license, which allows its use, distribution and reproduction in any medium as long as the original work is properly cited. More information at: <u>https://creativecommons.org/licenses/by/4.0</u>.

CONFLICT OF INTERESTS

The authors declare that this work involves no conflict of interest.

AUTHOR CONTRIBUTIONS

Diego Arenas: Conceptualization, Data Curation, Software, Research, Writing.

David Gutiérrez: Visualization, Validation.

Luis Miguel García López: Visualization, Validation.

Josep Vidal-Conti: Supervision, Validation.

Adrià Muntaner-Mas: Formal Analysis, Methodology, Supervision.

FUNDING

This study was not supported by funding sources.

RESEARCH ETHICS

The research project was submitted and approved by the Comité de Ética de la Investigación de la Universitat de les Illes Balears, protocol number 252CER22

HOW TO CITE

ARENAS, Diego; GUTIÉRREZ, David; GARCÍA LÓPEZ, Luis Miguel; VIDAL-CONTI, Joseph.; MUNTANER-MAS, Adrià. Application of the Sport Education model in Physical Education: the case of Spanish teachers. **Movimento,** v. 30, p. e30031, Jan./Dec. 2024. DOI: <u>https://doi.org/10.22456/1982-8918.137568</u>

EDITORIAL RESPONSIBILITY

Alex Branco Fraga*, Elisandro Schultz Wittizorecki*, Guy Ginciene*, Mauro Myskiw*, Raquel da Silveira*

*Universidade Federal do Rio Grande do Sul, Escola de Educação Física, Fisioterapia e Dança, Porto Alegre, RS, Brazil.