







# Areas of physical education and specialist roles sensitive to contemporary social demands

Josep Solà-Santesmas<sup>1\*</sup> , Albert Batalla-Flores<sup>2</sup> , Jordi Arboix-Alió<sup>1</sup>   
& Cristina Günther-Bel<sup>3</sup> 

<sup>1</sup> Department of Physical Activity and Sport Sciences, Ramon Llull University, Barcelona (Spain).

<sup>2</sup> Department of Applied Didactics, University of Barcelona, Barcelona (Spain).

<sup>3</sup> Department of Psychology, Ramon Llull University, Barcelona (Spain).



## Cite this article

Solà-Santesmas, J., Batalla-Flores, A., Arboix-Alió, J. & Günther-Bel, C. (2024). Areas of physical education and specialist roles sensitive to contemporary social demands. *Apunts Educación Física y Deportes*, 157, 1-8. [https://doi.org/10.5672/apunts.2014-0983.es.\(2024/3\).157.01](https://doi.org/10.5672/apunts.2014-0983.es.(2024/3).157.01)

## Edited by:

© Generalitat de Catalunya  
Departament de la Presidència  
Institut Nacional d'Educació  
Física de Catalunya (INEFC)

ISSN: 2014-0983

## \*Corresponding author:

Josep Solà Santesmas  
[josepss@blanquerna.url.edu](mailto:josepss@blanquerna.url.edu)

## Section:

Physical Education

## Original language:

Catalan

## Received:

November 14, 2023

## Accepted:

January 31, 2024

## Published:

July 1, 2024

## Front cover:

Boat Zero and Patriot Sail  
on a Glamour Barcelona Day.  
© Ugo Fonollá / America's Cup

## Abstract

Contemporary social transformation requires schools to be innovative in order to meet new educational demands. The main objective of the research was to collect the opinion of physical education specialists, primary and secondary school teachers, in relation to an updated proposal for areas of educational intervention and consequent roles to be assumed. The sample consisted of 209 physical education specialists as part of a descriptive mixed design study. A quantitative Likert-scale questionnaire was used to evaluate the 5 areas and 5 roles proposed. Pearson's correlations for the scores of both scales in relation to the total scores of the questionnaire were positive and strong ( $r_{\text{questionnaire-area}} = .884, p < .001$  and  $r_{\text{questionnaire-roles}} = .858, p < .001$ ), and the overall reliability of the items was good ( $\alpha = 0.756$ ). In addition, 30.6% of the sample (64 participants) voluntarily completed a qualitative narrative opinion questionnaire. In all areas and roles, the maximum score was chosen most frequently, with Physical Activity and Health (77.99%) and Teaching (86.6%) standing out respectively. No statistical significance was obtained in relation to gender or years of teaching experience, but the areas were sensitive to educational stage. Accordingly, the narrative responses revealed positive perceptions of the proposed areas and roles. Despite the emergence of new contemporary responsibilities in the discipline, specialists continue to focus on physical education that promotes physical activity and health from the perspective of teaching responsibility.

**Keywords:** corporeality, motor literacy, physical activity and health, physical activity and learning, sport and society.

## Introduction

The epistemological definition of physical education has been a subject of specialist debate regarding subjective understanding of its content and how best to deliver it (Depaepe et al., 2013). The subject has focused more on methodology than on clearly defined content, often not specifying what is to be learned, but rather implying it through vaguely defined objectives (Nyberg & Larsson, 2014). From a holistic perspective, if the learner does not connect meaningfully with the content, their learning is diminished (Dyson, 2014). Following Cañabate et al. (2018), today's schools should base learning on motor skills, cognition, empathy and emotional security. Through interdisciplinary projects incorporating dance and the arts, physical education would enhance creativity. On the other hand, if subject matter is reduced to motor behaviour alone, without touching on the essential disciplines that ensure a comprehensive understanding of human movement (physiology, pedagogy, history, sociology...), specialists will not advance a cultural reflection that gives meaning to practices (Backman & Barker, 2020).

The *International Charter of Physical Education, Physical Activity and Sport* (UNESCO, 2015a) introduced gender equality, non-discrimination and social inclusion, as well as the sustainability of sport. In parallel, *Quality Physical Education* (UNESCO, 2015b) emphasised that physical education should promote lifelong participation and that teaching should be entrusted to qualified staff. Quality physical education that ensures literacy and civic engagement, academic achievement, social inclusion which overcomes stereotypes, and the development of organic health, is underpinned by an emphasis on ethical values.

The study *Making Physical Education Dynamic and Inclusive for 2030* (OECD, 2019), which analysed physical education curricula in 18 countries, highlighted 4 areas of intervention: games and sports (individual and team), outdoor recreation and leisure activities, motor skills, dance and rhythmic expression and health and wellbeing content.

The recent *European Sports Charter* (European Council, 2021) stressed that human beings have the inalienable right to access sport in a healthy environment, both inside and outside schools. Physical education and sport are essential for personal development, as they guarantee rights to health, education, culture and participation in community life. Epistemologically, physical education should be aimed at sports practice, motor literacy and physical fitness, with the objective of acquiring basic motor skills and adequate performance in accordance with one's own abilities.

In the United States, the National Association for Sport and Physical Education (NASPE) launched the

*Comprehensive School Physical Activity Programs (CSPAP)* in 2008 to promote physical activity starting in elementary school. The program, revised in 2013 by the Society of Health and Physical Educators (SHAPE America), encouraged quality physical education and the promotion of school physical activity in order to reinforce the academic objectives of the subject. Particularly aimed at public health, the program recommended 60 minutes of moderate-vigorous physical activity per day for children and adolescents (Elliott et al., 2022), although the effectiveness of its implementation demonstrated moderately optimistic results. Mattson et al. (2020) demonstrated the positive effects of a CSPAP promoting physical activity at school after 36 weeks.

Successive changes in the Spanish state's competency-based education system since 2006 have shaped curricula in terms of the applicability of knowledge and its transversality. In the 2007-2022 period, physical education was organised in very stable content blocks, such as physical fitness and health, corporal expression, sports and outdoor recreational physical activities. However, although the latest curriculum revision (Department of Education, 2022) maintains a strong focus on active and healthy lifestyles, it reduces the emphasis on sport and corporal expression to accommodate for more current content on emotional management and the sustainability of practice spaces.

The above literature review provides a framework for defining the proposal areas. "Motor literacy" has been understood as the acquisition of motor skills allowing people to interact successfully in their natural and social environment (Edwards et al., 2017), while physical education aims to reclaim a corporeality outside of dualistic traditions (González & Sepúlveda, 2021). Neuroscience has emphasised that physical activity is a privileged framework for learning, highlighting the cognitive demands implicit in motor activity (Pesce et al., 2016). Sport values education through multiple gestural and tactical situations does not occur in simple practice, but in pedagogical impact, which gives it meaning (Philpot et al., 2021). Finally, the abundant evidence of the health benefits of regular physical activity in adolescence (Julian et al., 2022) necessarily establishes the school as the optimal setting for its promotion (Bentsen et al., 2022).

Along these lines, competence-based curriculum decrees have emphasised the importance of physical activity guidance and promotion in schools. At state level, the previous Royal Decree 1105/2014 (art. 6, *transversal elements of the curriculum*) emphasised that physical activity and a balanced diet had to become habits for pupils. Schools needed to promote the daily practice of sport and physical exercise during the school day, following the

recommendations of the relevant bodies. Unfortunately, it was specified that the design of the measures to be applied should be the responsibility of teachers with the appropriate specialisation, without explicit reference to a Physical Education specialist. Recently, in Catalonia, Decree 175/2022, on basic education (Annex 1, *Key competences and exit competences profile*), highlights the challenge of developing healthy lifestyle habits based on an understanding of the functioning of the body.

In order to define a physical education sensitive to contemporary social demands, the main objective of this article was to ask specialists their opinions in relation to a proposal for areas of educational intervention in line with the reference documents consulted, whilst also emphasising their role in their implementation. Secondary objectives were to find out whether this assessment would be significantly different according to gender, years of teaching experience and educational stage.

## Methodology

The study used a descriptive cross-sectional mixed methods research design, which integrates a primarily quantitative approach with a complementary qualitative approach (Creswell & Plano, 2017). This has been found to be fully adequate in physical activity and sport science research (Castañer et al., 2013).

## Participants

The non-probabilistic purposive sample consisted of 209 Physical Education specialists in Catalonia. The outreach for participation was carried out by the College of Physical Activity and Sport Professionals of Catalonia (COPLEFC), which centralised and organised the requests for presentations to the groups that showed interest (universities, associations, congresses and schools). All participants answered the quantitative part of the survey, and only 64 participants (30.6%) answered the qualitative part. In relation to gender, there were 129 male participants (62.2%) and 79 female participants (37.8%). Regarding years of teaching experience, the majority of the participants had more than 12 years of experience (59.1%). In terms of professional stage, 124 participants were primary school teachers (59.3%) and 85 were secondary school teachers (40.7%).

The required ethical principles were ensured by explaining the study to all participants in advance, obtaining their informed consent and guaranteeing the protection of their personal identity. COPLEFC itself promoted the research through a university scientific collaboration project.

## Procedure

15 face-to-face presentations were scheduled in different parts of Catalonia, only 11 of which took place due to the compulsory COVID-19 lockdown. From then on, data collection was carried out virtually. The face-to-face data collection followed a 45-minute presentation explaining the project, the promoting institution and, in particular, encouraging specialist participation to validate the proposal. This was done using links to the questionnaires on mobile phone or laptops. Following the lockdown, the questionnaires were made available online, accompanied by a video explaining the project, and a videoconference open to all interested parties was organised.

## Resources

Two *ad hoc* questionnaires were designed. A quantitative one, based on a Likert scale, and a qualitative one that asked for personal reasoning in relation to the items assessed. In order to finalise the two questionnaires and guarantee the validity of the content, successive modifications were made to improve the original questionnaire based on the information gathered in the pilot test carried out at the Pedagogical Resources Centre in Badalona with the participation of 50 Physical Education specialists, and on the basis of the opinion of 3 experts (2 Physical Education Pedagogy university teachers and an inspector from the Department of Education with the same speciality).

*Quantitative Questionnaire.* This consisted of three distinct parts. The first part collected personal information: gender, professional stage and years of teaching experience. The second part assessed the areas of educational intervention in physical education, and it consisted of five items: motor literacy, corporeality, physical activity and learning, sport and society and, finally, physical activity and health. The third part assessed the role of Physical Education specialists, a category which also consisted of five different items: organising and teaching, promoting a vision of the school from the perspective of the body, promoting and advising on multidisciplinary actions, promoting physical activity in school and, finally, ensuring the proper guidance of physical activities.

A Likert scale with a range of five options, ranging from 1 “Strongly disagree” to 5 “Strongly agree”, was used to record the responses. Cronbach’s  $\alpha$  statistic was applied to measure the reliability or internal consistency of all items. Taking values of .70 as “acceptable” and values of .80 as “good” (Navarro & Foxcroft, 2019), the reliability of the questionnaire as a whole, taking into account all 10 items, was considered good ( $\alpha = .756$ ).

**Qualitative Questionnaire.** In order to support the participants' critical reasoning, the qualitative part of the assessment followed the quantitative questionnaire, so that they were already familiar with the items. It consisted of two open-ended questions asking for an overall written assessment of the five areas of educational intervention and specialist roles, by means of the following text: "Please give an overall assessment of the approach to the areas of intervention (or the specialist roles). Please set out your main ideas, highlight the most relevant areas and make any suggestions for improvement that you think are relevant."

### Statistical Analysis

Quantitative analysis was carried out using the freely available statistical program Jamovi, version 2.2.5. Although the Likert scale minimises differences between the response options so that a quantitative analysis can be applied, this article will treat the items as categorical variables, calculating the statistics as frequency tables. Concepts such as "motor literacy", "corporeality" and "holistic content" are essentially qualitative in nature.

The 10 items were subjected to univariate multi-category analysis. The  $\chi^2$  Chi-square\_Goodness Of Fit Test was used to verify whether the observed frequency corresponded to the expected frequency. This test requires the assumption of sufficiently high expected frequencies, higher than 5, or 80% of expected frequencies higher than 5. As the lowest Likert ratings did not reach the minimum frequency, the variables had to be recategorised into three definitive items that fulfilled the statistical assumption of the test: the observed frequencies of values 1 and 2 were added to value 3 for each item. From this recategorisation, identical expected frequencies were sought for each of the three items (.333), and a 95% confidence interval.

Moreover, each of the 10 items was also subjected to a bivariate analysis in relation to gender, years of teaching experience and the professional stage of the participants. In this case, the Bivariate\_Chi Squared Test of Association was used and the variable "years of teaching experience" had to be recategorised. From the five categories presented in the questionnaire (0-3, 4-6, 7-9, 10-12 and 12+ years of experience), the statistical analysis was synthesised into 3 categories: 0-6, 7-12 and 12+. A 95% confidence interval was sought. Where there was statistical significance, the effect size or strength of association was calculated using Cramer's V statistic, ranging from 0 (none) to 1 (perfect).

Finally, Pearson's correlation coefficients were applied between the total scores of the quantitative questionnaire and the specific scores of both scales (areas of intervention and specialist roles).

The qualitative analysis of the content of the written responses was carried out using a double deductive-inductive approach. On the one hand, answers to the open-ended question on areas of educational intervention were analysed using the five items as previously established categories. On the other hand, answers to the open-ended question on specialist roles were analysed using an inductive approach in which the categories were derived from the textual data analysed.

## Results

### Statistical Results

When applying the  $\chi^2$  Chi-square\_Goodness Of Fit Test to both the variables "areas of educational intervention" and "specialist roles", statistically significant differences were found in the assessments of all items (Table 1).

**Table 1**  
 $\chi^2$  Chi-square\_Goodness Of Fit Test

Areas of Intervention	$\chi^2$ (2)	$p$
Motor Literacy	73.9	.001*
Corporeality	42.7	.001*
Physical Activity and Learning	77.1	.001*
Sport and Society	76.3	.001*
Physical Activity and Health	194	.001*
Specialist Role	$\chi^2$ (2)	$p$
Teaching	268	.001*
School and Corporeality	24.2	.001*
Holistic Actions	30.0	.001*
Promoting Physical Activity	183	.001*
Physical Activity Guidance	96.9	.001*

Note: \* Significant differences  $p < .01$

For all intervention area items, the maximum score on the Likert scale (5) was the most frequent choice, and scores were above 50% in all cases: Physical Activity and Health (77.99%), Physical Activity and Learning (60.3%), Motor Literacy (58.9%), Sport and Society (57.42%) and Corporeality (51.2%). Similarly, in all the specialist role items, the maximum score on the Likert scale (5) was the most frequent choice, ordered as follows: Teaching (86.6%), Promoting Physical Activity in Schools (76.56%), Proper Guidance of Physical Activities (63.16%) and, lastly, the only two items that did not reach 50%, School and Corporeality and Holistic Actions, both chosen with the same frequency (45.5%).

When applying the Bivariable\_Chi Squared Test of Association, significant associations were only found between gender and the item School and Corporeality ( $\chi^2 (2) = 8.53; p = .014$ ), and between educational stage and 4 intervention area items: Motor Literacy ( $\chi^2 (2) = 11.1; p = .004$ ), Corporeality ( $\chi^2 (2) = 6.74; p = .034$ ), Sport and Society ( $\chi^2 (2) = 13.1; p = .001$ ), and Physical Activity and Health ( $\chi^2 (2) = 6.97; p = .031$ ). In contrast, the other item in this block, Physical Activity and Learning, was not significant (Table 2). For all statistically significant items, Cramer’s V was used to consider the strength of the association, and it was weak in all cases (Gender – Corporeality and School = .202; Educational Stage and Motor Literacy = .231; Educational Stage and Corporeality = .180; Educational Stage and Sport and Society = .251 and Educational Stage and Physical Activity and Health = .183).

Overall, the bivariate analysis demonstrated that there was no statistical significance in relation to gender (except for the item School and Corporeality alone) and years of teaching experience. The items from the areas of educational intervention did reveal sensitivity to the educational stages of the specialists.

Pearson’s correlation matrix revealed strong positive ratings between the total scores of the questionnaire and the scores of each scale ( $r_{\text{questionnaire-area}} = .884, p < .001$  and  $r_{\text{questionnaire-roles}} = .858, p < .001$ ).

### Qualitative Analysis

Analysis of the qualitative responses allowed for a more in-depth exploration of the participants’ views on the proposal presented. Consistent with the quantitative assessments, the narrative responses revealed positive perceptions of the areas of intervention and roles.

With reference to the areas of intervention, the need for holistic and cross-cutting implementation was highlighted. Participants emphasised the complementarity of the five items (“All 5 areas of PE intervention are equally important and complement each other” - Participant 25), and their application as fundamental learning for the participant (“Above all, I agree on life-sustaining PE” - Participant 22).

The value of coordinated work between different disciplines was highlighted. In this sense, the importance of physical education being supported by other areas of learning was emphasised (“I personally believe that it is important to work on all areas of PE and that they should simultaneously be worked on from other areas in order to reinforce the importance of PE in children of all ages” - Participant 27). However, they highlighted the potential for PE to complement the acquisition of learning in other areas (“I consider PE as an area capable of intervening in different areas of our children’s learning, not only in aspects related to motor skills” - Participant 54). The emotional competences of the participant were also emphasised: “I would add the body and emotions” -

**Table 2**  
Bivariate  $\chi^2$  Chi Squared Test of Association

Areas of Intervention	Gender		Years of Teaching Experience		Educational Stage	
	$\chi^2 (2)$	P (Cramer’s V)	$\chi^2 (4)$	$p$	$\chi^2 (2)$	$p$
Motor Literacy	5.92	.052	0.389	.983	11.1	<b>.004*</b> (V=.231)
Corporeality	1.87	.393	3.78	.436	6.74	<b>.034*</b> (V=.180)
Physical Activity and Learning	1.94	.378	2.95	.566	2.16	.340
Sport and Society	0.712	.701	3.33	.504	13.1	<b>.001*</b> (V=.251)
Physical Activity and Health	2.96	.227	0.647	.958	6.97	<b>.031*</b> (V=.183)
Specialist Role	$\chi^2 (2)$	$p$				
Teaching	5.96	.051	3.97	.410	0.526	.769
School and Corporeality	8.53	<b>.014*</b> (V=.180)	6.29	.179	4.40	.111
Holistic Actions	2.51	.285	0.198	.995	1.93	.381
Promoting Physical Activity	0.165	.921	2.91	.573	3.65	.161
Physical Activity Guidance	1.64	.441	5.53	.238	0.947	.623

Note: \* Significant differences  $p < .05$ . Cramer’s V is applied to establish the strength of the association.

Participant 46, and “I see the introduction of a new field as interesting. This area would aim to provide students with psychological resources, empowerment, self-knowledge, emotion management, conflict management, social cohesion, etc.” - Participant 32.

Some participants highlighted the need for general awareness-raising (“I feel that there is little awareness of the power of learning and therefore we should raise awareness among the general public, but especially among professionals themselves” - Participant 20); and that specific to the school (“The mentality of teaching staff should be changed into one that is more holistic” - Participant 44).

The need for joint critical reflection among all physical education professionals was also identified (“I think it is important to be aware that, as PE professionals, we have a specific literacy, and it is often very biased and limited” - Participant 17); as well as the need to unify criteria within the discipline itself (“Not having some basic common lines of work for each course doesn’t help either... An academic body on which to rely. The competences are very general and everyone does what they can. That doesn’t happen in other subjects” - Participant 12).

With regard to specialist roles, the qualitative inductive analysis allowed the participants’ responses to be grouped into two categories. Firstly, participants gave an overall positive assessment of specialist roles. A tendency to prioritise the task “of organising and delivering teaching” as the main task from which actions related to other tasks could be derived was identified (“Organising and delivering teaching in the area of PE is our priority. The other areas of intervention contribute to the first objective” - Participant 11). However, a perception of the specialist as an active agent in education was defended: physical activity and physical education are not the same. In this sense, the importance of perceiving the specialist as a professional who transforms the local and social reality was highlighted (“To promote the link between the school and the social environment with a transforming, critical and humanist will” - Participant 17).

Secondly, responses aimed at conveying the need to recognise and value the role of physical education specialists were identified. The position currently occupied by a single professional in relation to other professionals is perceived as an impediment to the satisfactory development of competences (“You may want to do a lot, but if no one follows your lead, you are on your own” - Participant 21). In line with this, some answers emphasise the importance of professionals being involved and trained in order to guarantee a quality discipline (“For me it is paramount, it is the need for good professionals who dignify the profession and who embody it with the passion and energy necessary for this paradigm shift” - Participant 10). As can be observed in the responses, the role of the specialist must be defended both

by professionals themselves (“Teachers must try to make their work visible and not make it appear as though anyone could do it” - Participant 49) and by the organisation of the school (“We cannot allow the basketball monitors, for example, in our schools to be CSE students with no training whatsoever” - Participant 64).

## Discussion

With regard to the main objective of the study, it can be affirmed that physical education specialists rate the 10 proposed items as absolutely correct, all of them of statistical significance and coherently aligned with the demands of the main international organisations (UNESCO, 2015 a and b; OECD, 2019; Council of Europe, 2021).

However, despite attempts to modernise the subject, the focus remains on teaching and physical activity for health. In fact, based on the frequency of the maximum score on the Likert scale, the most highly rated area is Physical activity and Health, 17.69% above the preferred learning framework. The most prominent role continues to be Teaching, 10.1% above Promoting Physical Activity in Schools. One might consider that PE is still not very responsive to demands (Kirk, 2012), with the most innovative areas being less valued.

The overwhelming acceptance of physical activity for health reinforces recognition of the subject, which includes the roles of health promotion and guidance (Romero et al., 2021). Schools increase physical activity at break time, incorporate restorative periods of physical activity for the body and promote active travel from home (Mahar et al., 2006). Although most curricula include health-related competences, studies reveal little evidence of the impact of physical activity covered in the subject on the total exercise of adolescents (Arboix et al., 2022).

The high value placed on physical activity as a privileged framework for learning and its importance in motor literacy stands out. In this sense, positive evidence of physical activity on executive functions and memory has been reported (Álvarez et al., 2017). In parallel, the correct acquisition of movement patterns contributes to body awareness, self-fulfilment, expressiveness and social relationships (Edwards et al., 2017).

Sport is surprisingly undervalued even in qualitative assessments. Sport constantly appears in mass media, but not always reflecting exemplary behaviour (Shields et al., 2018). A sport culture is necessary for practitioners and consumers in order to implement the values that characterise sport in everyday life (Wallhead et al., 2020).

Corporeality represents the great unknown in schools, and scores the lowest, a remarkable fact given the participants were specialists. The dualist school does

not consider motor activity to be intellectual education and keeps it separate from classically cognitive subjects. In contrast, new trends establish the body as the core of emotional intelligence managed through motor practice (Quin et al., 2017). The new PE competency curriculum in Catalonia (Department of Education, 2022) focuses on emotional education linked to corporeality, which revalues an integral definition of human individuality, and this is echoed in the study's own qualitative assessments.

On the other hand, the lack of defined areas is problematic for the more academic specialists. Poorly defined areas of intervention mean that each specialist interprets these areas subjectively and that educational proposals can be highly variable. Academic specialists would like to see improved specification of content, which would facilitate stronger collaborative work, because all participants would employ similar narratives (Decorby et al., 2005).

The fact that teaching is the responsibility of specialist teachers at secondary level, and that at primary level generalist teachers assume responsibility for it, can create dysfunctions in the pedagogical approach. Qualitative approaches highlight the teacher's own responsibility to raise the prestige of the social recognition of the subject, which is usually regarded skeptically in terms of its contribution to social demands (Viscione et al., 2019). A good example is the call to link school and society from a humanistic perspective. In this sense, García et al. (2023) highlighted that the promotion of values is a critical factor in the role of teachers, which encourages coexistence, emotional development and the integral achievement of a healthy lifestyle.

Although the current education system emphasises interdisciplinary projects, holistic content receives the worst rating. In contrast, the qualitative reflections of specialists insist on promoting interdisciplinary activities that mix several fields and create connections between physical education and other subjects, which would reinforce transversality (Solà, 2021).

In relation to the secondary objectives, it is concluded that the areas of educational intervention are neither gender-sensitive nor sensitive to years of teaching experience. On the other hand, they are sensitive to educational stage, representing different expectations among teachers and professors (D'Elia, 2019). This is particularly significant given the new curricula mention a joint basic education that brings together both primary and secondary education (Jones & Green, 2017). Specialist roles are not very sensitive to the variables analysed, and gender differences are only revealed in relation to the item Corporeality. In fact, the variable years of teaching experience proved to be insignificant, although 59.1% had more than 12 years of experience.

## Conclusions

Following a mixed methods design, the unanimous acceptance of the areas of intervention and the consequent roles to be assumed by physical education specialists has been demonstrated, with Teaching and Physical Activity for Health standing out respectively. Despite the current system of competency-based education, holistic proposals still need to be strengthened, along with the treatment of corporeality and emotional education at school. It has been demonstrated that the areas of intervention are sensitive to educational stage, but no differences have been found in terms of gender or years of teaching experience. This suggests that the areas of intervention should be reconsidered in order to ensure that they are universal to primary and secondary school stages.

## Referencias

- Álvarez, C., Pesce, C., Cavero, I., Sánchez, M., Martínez, J. A., & Martínez, V. (2017). The Effect of Physical Activity Interventions on Children's Cognition and Metacognition: A Systematic Review and Meta-Analysis. *Journal of the American Academy of Child & Adolescent Psychiatry*, 56(9), 729-738. <https://doi.org/10.1016/J.JAAC.2017.06.012>
- Arboix, J., Sagristà, F., Marcaida, S., Aguilera, J., Peralta, M., Solà, J., & Buscà, B. (2022). Relación entre la condición física y el hábito de actividad física con la capacidad de atención selectiva en alumnos de enseñanza secundaria. *Cuadernos de Psicología del Deporte*, 22(1), 1-13. <https://doi.org/10.6018/cpd.419641>
- Backman, E., & Barker, D. M. (2020). Re-thinking pedagogical content knowledge for physical education teachers – implications for physical education teacher education. *Physical Education and Sport Pedagogy*, 25(5), 451-463. <https://doi.org/10.1080/17408989.2020.1734554>
- Bentsen, P., Mygind, L., Elsborg, P., Nielsen, G., & Mygind, E. (2022). Education outside the classroom as upstream school health promotion: 'adding-in' physical activity into children's everyday life and settings. In *Scandinavian Journal of Public Health*, 50(3), 303-311. <https://doi.org/10.1177/1403494821993715>
- Cañabate, D., Colomer, J., & Olivera, J. (2018). Movement: A Language for Growing. *Apunts Educación Física y Deportes*, 134, 146-155. [https://doi.org/10.5672/apunts.2014-0983.cat.\(2018/4\).134.11](https://doi.org/10.5672/apunts.2014-0983.cat.(2018/4).134.11)
- Castañer, M., Camerino, O., & Anguera, M. T. (2013). Mixed Methods in the Research of Sciences of Physical Activity and Sport. *Apunts Educación Física y Deportes*, 112, 31-36. [https://doi.org/10.5672/apunts.2014-0983.cat.\(2013/2\).112.01](https://doi.org/10.5672/apunts.2014-0983.cat.(2013/2).112.01)
- Creswell, J. W., & Plano, V. L. (2017). *Designing and Conducting Mixed Methods Research*. SAGE Publications Ltd. In SAGE Publications, Inc.
- Decorby, K., Halas, J., Dixon, S., Wintrup, L., & Janzen, H. (2005). Classroom Teachers and the Challenges of Delivering Quality Physical Education. *Journal of Educational Research*, 98(4), 208-221. <https://doi.org/10.3200/JOER.98.4.208-221>
- D'Elia, F. (2019). The training of physical education teacher in primary school. *Journal of Human Sport and Exercise*, 14(Proc1), S100-S104. <https://doi.org/10.14198/JHSE.2019.14.PROC1.12>
- Depaepae, F., Verschaffel, L., & Kelchtermans, G. (2013). Pedagogical content knowledge: A systematic review of the way in which the concept has pervaded mathematics educational research. *Teaching and Teacher Education*, 34, 12-25. <https://doi.org/10.1016/j.tate.2013.03.001>
- Departament d'Educació, Generalitat de Catalunya. "Decret 175/2022, de 27 de setembre, d'ordenació dels ensenyaments de l'educació bàsica". *Diari Oficial de la Generalitat de Catalunya* (29 setembre 2022), núm. 8762, pp. 1-491

- Dyson, B. (2014). Quality Physical Education: A Commentary on Effective Physical Education Teaching. *Research Quarterly for Exercise and Sport*, 85(2), 144–152. <https://doi.org/10.1080/02701367.2014.904155>
- Edwards, L. C., Bryant, A. S., Keegan, R. J., Morgan, K., & Jones, A. M. (2017). Definitions, foundations and associations of physical literacy [Article]. *Sports Medicine (Auckland)*, 47(1), 113–126. <https://doi.org/10.1007/s40279-016-0560-7>
- Elliott, E., McKenzie, T., Woods, A. M., Beighle, A. E., Heidorn, B., & Lorenz, K. A. (2022). Comprehensive School Physical Activity Programs: Roots and Potential Growth. *Journal of Physical Education, Recreation & Dance*, 93(5), 6–12. <https://doi.org/10.1080/07303084.2022.2053472>
- European Council. (2021). *European Sports Charter*. <https://rm.coe.int/recommendation-cm-rec-2021-5-on-the-revision-of-the-european-sport-cha/1680a43914>
- García, J., Belando, N., Fernández, F. J., & Valero, A. (2023). Prosocial behaviours, Physical Activity and Personal and Social Responsibility Profile in Children and Adolescents. *Apunts Educación Física y Deportes*, 153, 79–89. [https://doi.org/10.5672/APUNTS.2014-0983.ES.\(2023/3\).153.07](https://doi.org/10.5672/APUNTS.2014-0983.ES.(2023/3).153.07)
- González, L. I., & Sepúlveda, C. B. (2021). Documentary Research on Body and Corporeity at School. *Revista Electrónica Educare*, 25(3), 1–16. <https://doi.org/10.15359/REE.25-3.31>
- Jones, L., & Green, K. (2017). Who teaches primary physical education? Change and transformation through the eyes of subject leaders. *Sport, Education and Society*, 22(6), 759–771. <https://doi.org/10.1080/13573322.2015.1061987>
- Julian, V., Haschke, F., Fearnbach, N., Gomahr, J., Pixner, T., Furthner, D., Weghuber, D., & Thivel, D. (2022). Effects of Movement Behaviors on Overall Health and Appetite Control: Current Evidence and Perspectives in Children and Adolescents. *Current Obesity Reports*, 11(1), 10–22. <https://doi.org/10.1007/s13679-021-00467-5>
- Kirk, D. (2012). Physical Education Futures: Can we reform physical education in the early 21st Century? *Ejournal de la recherche sur l'intervention en éducation physique et sport*. <https://doi.org/10.4000/ejrieps.3222>
- Mahar, M. T., Murphy, S. K., Rowe, D. A., Golden, J., Shields, A. T., & Raedeke, T. D. (2006). Effects of a classroom-based program on physical activity and on-task behavior. *Medicine and Science in Sports and Exercise*, 38(12), 2086–2094. <https://doi.org/10.1249/01.mss.0000235359.16685.a3>
- Mattson, R. E., Burns, R. D., Brusseau, T. A., Metos, J. M., & Jordan, K. C. (2020). Comprehensive School Physical Activity Programming and Health Behavior Knowledge. *Frontiers in Public Health*, 8. <https://doi.org/10.3389/fpubh.2020.00321>
- Ministerio de Educación, Cultura y Deporte, Gobierno de España. “Real Decreto 1105/2014, de 26 de diciembre, por el que se establece el currículo básico de la Educación Secundaria Obligatoria y del Bachillerato”. *Boletín Oficial del Estado* (3 enero 2015), núm. 3, pp. 1–21.
- Navarro, D.J. & Foxcroft, D.R. (2019). *Learning statistics with jamovi: a tutorial for psychology students and other beginners. (Version 0.70)*. <https://doi.org/10.24384/hgc3-7p15>
- National Association for Sport and Physical Education (2008). *Comprehensive School Physical Activity Programs*. <https://files.eric.ed.gov/fulltext/ED541610.pdf>
- Nyberg, G., & Larsson, H. (2014). Exploring ‘what’ to learn in physical education. *Physical Education and Sport Pedagogy*, 19(2), 123–135. <https://doi.org/10.1080/17408989.2012.726982>
- Organisation for Economic Cooperation and Development\_OECD. (2019). *Making Physical Education Dynamic and Inclusive for 2030*. [https://www.oecd.org/education/2030-project/contact/oecd\\_future\\_of\\_education\\_2030\\_making\\_physical\\_dynamic\\_and\\_inclusive\\_for\\_2030.pdf](https://www.oecd.org/education/2030-project/contact/oecd_future_of_education_2030_making_physical_dynamic_and_inclusive_for_2030.pdf)
- Pesce, C., Masci, I., Marchetti, R., Vazou, S., Sääkslähti, A., & Tomporowski, P. D. (2016). Deliberate Play and Preparation Jointly Benefit Motor and Cognitive Development: Mediated and Moderated Effects. *Frontiers in Psychology*, 7(MAR). <https://doi.org/10.3389/FPSYG.2016.00349>
- Philpot, R., Gerdin, G., Smith, W., Linnér, S., Schenker, K., Westlie, K., Mordal Moen, K., & Larsson, L. (2021). Taking action for social justice in HPE classrooms through explicit critical pedagogies. *Physical Education and Sport Pedagogy*, 26(6), 662–674. <https://doi.org/10.1080/17408989.2020.1867715>
- Quin, D., Hemphill, S. A., & Heerde, J. A. (2017). Associations between teaching quality and secondary students’ behavioral, emotional, and cognitive engagement in school. *Social Psychology of Education*, 20, 807–829. <https://doi.org/10.1007/S11218-017-9401-2>
- Romero, Ó., Lago, J., Toja, B., & González, M. (2021). Propósitos de la Educación Física en Educación Secundaria: revisión bibliográfica. *Retos*, 40, 305–316. <https://doi.org/10.47197/RETOS.V1140.80843>
- Solà, J. (2021). Estudio de la transversalidad de los contenidos en Educación Física a través de los currículos competenciales (Study of the transversality of the contents in Physical Education through the competency-based curricula). *Retos*, 40, 419–429. <https://doi.org/10.47197/RETOS.V0140.81783>
- Shields, D. L., Funk, C. D., & Bredemeier, B. L. (2018). Relationships among moral and contesting variables and prosocial and antisocial behavior in sport. *Journal of Moral Education*, 47(1), 17–33. <https://doi.org/10.1080/03057240.2017.1350149>
- United Nations Educational, Scientific and Cultural Organization (UNESCO) (2015a). *International Charter of Physical Education and Sport*. <https://unesdoc.unesco.org/ark:/48223/pf0000235409>
- United Nations Educational, Scientific and Cultural Organization (UNESCO) (2015b). *Quality Physical Education: guidelines for policy makers*. <https://unesdoc.unesco.org/ark:/48223/pf0000231101>
- Viscione, I., Invernizzi, P. L., & Raiola, G. (2019). Physical education in secondary higher school. *Journal of Human Sport and Exercise*, 14(Proc4), S706–S712. <https://doi.org/10.14198/JHSE.2019.14.PROC4.31>
- Wallhead, T. L., Hastie, P. A., Harvey, S., & Pill, S. (2020). Academics’ perspectives on the future of sport education. *Physical Education and Sport Pedagogy*, 26(5), 533–548. <https://doi.org/10.1080/17408989.2020.1823960>

**Conflict of Interests:** No conflict of interest was reported by the authors.



© Copyright Generalitat de Catalunya (INEFC). This article is available at the URL <https://www.revista-apunts.com/en/>. This work is licensed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License. The images or other third party material in this article are included in the article’s Creative Commons license, unless indicated otherwise in the credit line; if the material is not included under the Creative Commons license, users will need to obtain permission from the license holder to reproduce the material. To view a copy of this license, visit <http://creativecommons.org/licenses/by-nc-nd/4.0/>