

PHYSICAL EDUCATION AND PERSONALIZED LEARNING IN LINE WITH EUROPEAN UNION AND NATIONAL STANDARDS

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Abstract

Physical education represents a central discipline for promoting the psychophysical well-being of adolescents, in a context characterized by a growing incidence of sedentary lifestyles. This trend, associated with a reduction in regular physical activity, has negative effects on the physical, emotional, and social development of students, making targeted educational intervention urgent (Shao T. & Zhou X., 2023). However, the heterogeneity of motor skills and sports experiences, determined by individual, social, and cultural factors, represents a significant challenge for teachers, who must design activities that are both inclusive and compliant with national curriculum objectives. The present study aims to analyze innovative teaching strategies that promote motivation and active participation in heterogeneous educational contexts, with a focus on adolescence. Approaches such as the differentiation of motor activities based on individual needs, the use of diversified workstations, peer collaboration, and the valorization of students' personal inclinations and preferences will be explored. These strategies aim to create a flexible and stimulating learning environment, where each student can feel welcomed and supported in their growth journey. Through a systematic review of scientific literature, the work intends to provide a structured theoretical framework that highlights the effectiveness of inclusive teaching interventions in improving not only motor skills but also aspects related to intrinsic motivation, perceived self-efficacy, and social cooperation. Previous studies have shown that the personalization of learning paths in physical education, associated with collaborative practices, promotes emotional involvement and reduces the sense of inadequacy in students who are less skilled from a motor point of view (Bailey et al., 2019). Therefore, the aim is to construct and provide operational indications for educators, to balance the need to personalize learning-teaching processes (Bruner, J. S. 2002) with the achievement of the expected training standards. Particular attention will be paid to the role of the teacher as a facilitator of active, inclusive learning oriented towards the valorization of diversity. In this way, physical education can become a key tool to respond to the pedagogical challenges posed by today's society, promoting holistic well-being and the social integration of adolescents in diverse educational contexts.

Keywords: *Physical education, secondary school education, motor skills, sedentary lifestyle, personalization.*

1. Introduction

The scientific literature highlights how widespread in today's socio-cultural scenario is a significant tendency to adopt a sedentary lifestyle (Martins et al., 2020), which produces negative effects on the physical, emotional and social development of students, making a targeted educational intervention urgent (Shao T. & Zhou X., 2023). In this sense, physical education is a central discipline for the promotion of adolescents' psychological and physical well-being. However, the classroom context presents considerable internal heterogeneity. Students' prior and developing skills can be significantly influenced by the performance of extracurricular activities, resulting in the presence of significant inter-individual variability (April Yesaya Sipayung & Aliman, 2024). This heterogeneity must be integrated with the structuring of a learning context, often de-structured, which requires careful management of spaces, according to safety, interaction between students and the objectives of the intervention. These two specificities attributable to the discipline represent a significant challenge for teachers, who are called upon to design activities that are both inclusive and consistent with the objectives of the national curriculum. As with other disciplines, physical education, too, cannot be separated from the institutional regulatory framework that defines its objectives, content and implementation methods. Internationally, there is substantial alignment regarding the learning objectives to be pursued; however, the number of hours per week devoted to the discipline varies significantly in the different countries of the European Union

(European Commission, 2013). This study focuses on the methodological and didactic strategies implemented in the field of applied exercise science for adolescents in the international context.

2. Aim

This study aims to analyse innovative teaching strategies that foster motivation and active participation in heterogeneous educational contexts, with a focus on adolescents. Through a systematic review of the scientific literature, the work aims to provide a structured theoretical framework that highlights the effectiveness of inclusive teaching interventions in improving not only motor skills, but also aspects related to intrinsic motivation, perceived self-efficacy and social cooperation.

3. Methods and tools

To outline a structured theoretical framework useful to support teachers in the design of innovative, effective physical education consistent with the needs and challenges of the contemporary school system, the systematic review work took into consideration studies on effective methodological approaches in secondary education. To support the argumentation, recent empirical data concerning the involvement of student emotionality, the influence of gender stereotypes, and proposed methods are described.

4. Databases and research criteria

The literature search was conducted on several databases (Google Scholar, PubMed, EBSCO, Scopus, MDPI), and considered studies published from 2017 to January 2025. The main search criteria used are: *Physical education in high schools*, *Physical education and gender*, *Didactic approach in physical education*. Both argumentative and experimental articles were considered.

5. Results

A total of 25 articles were selected. They are listed below complete with title and citation. Further information, complete with DOIs, will be given in the bibliography.

Table 1. Articles examined.

Citation	Title
April Yesaya Sipayung & Aliman, 2024	How Does Fitness Level Affect Physical Education, Sports, And Health Student Learning Achievement
Ben Dyson et al., 2024	Students' Perspectives of Social and Emotional Learning in a High School Physical Education Program
Cassandra Sparks et al., 2017	An intervention to improve teachers' interpersonally involving instructional practices in high school physical education: Implications for student relatedness support and in-class experiences
Cristiana Bessa et al., 2021	Sport Education and Traditional Teaching: Influence on Students' Empowerment and Self-Confidence in High School Physical Education Classes
Demian Bazyliuk & L. P. Dolzhenko, 2024	Gender approach in physical culture classes of high school students
Elisa Huéscar Hernández et al., 2019	Motivational Profiles of High School Physical Education Students: The Role of Controlling Teacher Behavior.
Hans van der Mars et al., 2018	Physical Education Meets Teacher Evaluation: Supporting Physical Educators in Formal Assessment of Student Learning Outcomes
Iván López Fernández et al., 2021	High School Physical Education Teachers' Perceptions of Blended Learning One Year after the Onset of the COVID-19 Pandemic
James Darwin N Lagman & Richard John W Hernandez, 2024	Assessing the Impact of Remote Learning on Learning Competencies of Senior High School Students in the Health Optimizing Physical Education (HOPE) Program
Jia Sun et al., 2024	A Study on the Implementation of the Student-Centered Teaching Model in Junior High School Physical Education Classes in Beijing
Jomar S. Tianio & Jefferson Moreno De Castro, 2024	Innovative Improvement in the Physical Education Learning Experience: A Study at Dela Paz National High School Philippines
Juan Antonio Moreno-Murcia et al., 2018;	Perceptions of Controlling Teaching Behaviors and the Effects on the Motivation and Behavior of High School Physical Education Students.

Kelly L. Simonton et al., 2021	Caring Climate, Emotions, and Engagement in High School Physical Education
Ken Murfay et al., 2024	Supporting Students' Physical Activity Self-Efficacy within High School Physical Education
Ken R. Lodewyk & Lodewyk, 2018	Associations between trait personality, anxiety, self-efficacy and intentions to exercise by gender in high school physical education
Matt Alexander Taylor & Kevin John MacLeod, 2024	Fostering Competence and Autonomy in High School Physical Education Classes: An Exploration of Intricate Relationships
Nicholas Washburn, 2023	Enhancing the Legitimacy of High School Physical Education
Nick Faulds & Zack Beddoes, 2023	Perceptions of Universally Designed Adventure Education in High School Physical Education
Olivia J. Gillispie et al., 2023	Selecting Content to Teach in High School Physical Education
V. Bilyk et al., 2024	Using methods of self-regulation of stressful states as a means of increasing psycho-emotional stability of high school pupils in the process of physical education
Wyndell A. Casquejo et al., 2023	Appropriateness of assessment modes in senior high school physical education learning standards
Yang Gu Lee, 2024	Interrelationships among Perceptions of Physical Self-Concepts in High School Students Participating in Physical Education Classes
Yuling Pan et al., 2019	Comparison of Learning Effects of Merging TPSR Respectively with Sport Education and Traditional Teaching Model in High School Physical Education Classes
Yuxiao Deng, 2023	Influence of Gender Stereotype on Participation in Physical Education Class of High School Students
Zhanna Domina, 2024	Modern approaches to increase the efficiency of physical education of high school students

6. Discussion

The literature on motor sciences in schools is rich in evidence that focuses attention on improving the discipline's didactic proposal. In particular, the inclusion criteria have led to the identification of different focuses that concern, on the one hand, the relationship between psychophysical characteristics and ... and, on the other, the issues of didactic design. Studies that consider the processes that regulate the relationship between psychophysical transformations in adolescence and participation in motor activities highlight the role of the correct implementation of practices in promoting the overcoming of gender stereotypes (Demian Bazyluk & L. P. Dolzhenko, 2024). Conversely, in the absence of proper declination of interventions, gender stereotypes appear to significantly influence student engagement and risk compromising participation in activities (Yuxiao Deng, 2023). An experimental study that investigated the effectiveness of a programme of Yoga, Tai chi and Qigong as tools for promoting the psycho-emotional resilience of Ukrainian students, highlighted how much the emotional components, the student's perception of himself and his role in the community are influenced by the quality of participation (V. Bilyk et al., 2024). Even in the context of studies that more closely investigate the topic of instructional design, the involvement of the student's emotional sphere together with his or her proactivity are often at the centre of the methodological debate that compares traditional approaches, full of standardised tests and tabular evaluations, and more innovative methods, such as games and the personalisation of activities (Cristiana Bessa et al., 2021; Feiquan Fan et al., 2024; Yuling Pan et al., 2019). In particular, according to studies, the former seems to inspire more confidence in teachers due to their formal correctness in measuring quantitative motor skills (Jia Sun et al., 2024); whereas, the latter are more useful for developing 'soft' skills such as cooperation and intrinsic motivation (Yuling Pan et al., 2019), which are rarely covered by traditional methods. The centrality of the student in an inclusive school implies increasing attention to context-dependent variables. In this sense, the use of alternative methodologies seems to allow for a more effective removal of architectural, emotional and cognitive barriers, often related to the more subtle and subjective aspects of the educational experience (Ken R. Lodewyk & Lodewyk, 2018). The referenced studies present numerous insights and empirical evidence that underline the risk of neglecting these dynamics. At the same time, they invite reflection whereby alternative, ad-hoc structured teaching methodologies run the risk of being valid only in specific contexts, and of not being usable in different institutional and cultural contexts (Jia Sun et al., 2024; Zhanna Domina, 2024).

7. Conclusion

In today's school context, in which the student is at the centre of teaching and teaching aims to be increasingly inclusive and customisable, it is essential that every teaching proposal, right from the planning

stage, considers the risks and criticalities of the methodologies applied. The framework outlined seems to highlight how the student's globality is involved in the discipline of Motor Sciences, highlighting how educational success is influenced by the harmonious integration of its different dimensions. This review suggests the importance of adopting mixed teaching approaches, balancing strategies indicated as 'traditional' for the development and measurement of performance skills with more flexible and customisable methodologies aimed at the growth of soft skills. While the former guarantee solidity in the evaluation of the learning process, the latter favour the development of personal and social skills, which are less easily quantifiable with objective instruments. In order to decline effectively in the respective national contexts, this study can constitute an initial epistemological basis, to be supplemented with further complementary studies, which through the use of quantitative and qualitative survey strategies investigate the opinions of teachers in relation to the different implementation methodologies, with the aim of understanding how it is possible to integrate traditional and innovative approaches, which are effectively inclusive and sustainable, both in normative and didactic terms.

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