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ABSTRACT

This paper intends to analyze PL by highlighting its potential in the educational process and the challenges that need to be addressed to promote a more holistic and integrated approach to movement and health. The aim of this paper is to prompt a reflection on how PL can become a central component of modern education, contributing not only to individual development but also to collective well-being.

Il contributo si propone di analizzare la PL evidenziando le sue potenzialità nel processo educativo e le sfide da affrontare per promuovere un approccio più olistico e integrato al movimento e alla salute. L'obiettivo finale è di stimolare una riflessione su come la PL possa diventare una componente centrale dell'educazione moderna, contribuendo non solo allo sviluppo individuale, ma anche al benessere collettivo.

KEYWORDS

Physical literacy, Educational process, Learning, Motor skills, Quality of physical education
Alfabetizzazione motoria, Processo educativo, Apprendimento, Competenze motorie, Qualità dell'educazione fisica

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¹ This paper is the result of the shared work of the authors; however, for the purposes of the attributions of its individual parts it is divided as follows: Simona Iannaccone §§ Introduction and Physical Literacy in Educational Contexts; Clorinda Sorrentino §§ Physical literacy as a key element in quality physical education, Angela Vivona §§ The role of teachers and conclusions

Introduction

Over the past two decades, strengthening research related to physical activity and physical education has led to a greater understanding of the importance of these practices and how they should be promoted at the individual and collective level. Recent studies have revealed not only the positive effects on integrating physical activity into daily life, but also the ways in which it can be stimulated and sustained in the long term (Allan, Turnnidge, and Côté, 2017).

In this context, we will refer to the term physical literacy, believing it to be the most appropriate to translate in Italian the concept of Physical Literacy, which reflects both the intrinsic desire of individuals to actively participate in exercise and the need for meaningful and satisfying experiences through motor activity. Globally, educational organizations and researchers have argued that physical literacy should receive the same educational recognition given to language and numeracy literacy (Delaney, Donnelly, News, & al., 2008). Although numerous agencies, research groups, and governments are currently promoting initiatives related to physical literacy around the world, the definitions adopted vary significantly. This lack of uniformity can compromise the accurate measurement of physical literacy, hinder interpretation of results, and make it difficult to consistently and meaningfully accumulate evidence from research (Keegan, Edwards, Bryant, & al., 2015).

Physical literacy (PL) is a multidimensional concept that includes the understanding of movement as an essential condition of human experience, sometimes described as an embodied experience. In addition, the social aspects of movement are an implicit imperative of PL. It should be considered as a concept that captures the broader social processes that contribute to lifelong learning.

The idea of physical literacy was initially proposed by Whitehead (2013) in response to growing concerns about the direction that traditional physical education was taking and the worrying increase in physical inactivity globally, with the resulting health implications (Hallal et al., 2012). However, little consideration has been given to the role that PL plays in promoting positive health behaviors. There is no clear conceptual framework based on existing empirical evidence linking PL to health, nor has an evidence-based case been presented for such a position. Whitehead, in fact, emphasized that physical education should not be limited to sports activities or competitive models, but should focus on training individuals to appreciate and integrate physical activity as a fundamental part of their well-being. In this context, physical literacy has evolved as a concept that represents a way to promote a broader and more inclusive view of physical activity that not only encourages participation but also promotes physical self-sufficiency and an improvement in quality of life.

Physical literacy has been defined as an approach that enhances our physical and existential dimensions, aiming to develop each individual's physical potential holistically through learning motor skills, awareness of one's abilities and limitations, and acquisition of healthy behaviors (Lundvall, 2015, p. 116; Whitehead, 2010).

However, despite the broad consensus on the importance of physical literacy, the concept has been interpreted in different ways depending on cultural, political, and educational contexts, with significant variations even among countries promoting its adoption (Edwards, Bryant, Keegan, Morgan & Jones, 2017). These differences in interpretation have raised concerns about a possible loss of consistency with respect to the core principles of physical literacy and its uneven application, which could lead to confusion in educational and health programs. Some are concerned that the concept is being emptied of its original meaning, being reduced to simple interventions promoting physical activity without effective attention to its educational and transformative value. Globally, therefore, the need has emerged for a clearer and more shared definition of the term that overcomes disparities in interpretation and promotes the implementation of coherent and effective policies.

In response to these issues, researchers have sought to clarify the meaning of physical literacy and how it can be translated into concrete actions in educational and social practice (Dudley, Cairney, Wainwright, Kriellaars, and Mitchell, 2017; Edwards et al., 2017). Studies on the subject have highlighted a wide range of perspectives and approaches, ranging from physical literacy as an individual skill to integrating it into school, community, and work settings, all with the goal of fostering lasting change in physical and health behaviors. In this context, it is crucial to further explore how different interpretations can coexist and contribute to a comprehensive and inclusive vision of physical literacy.

When conceived holistically and considered the inclusion of physical, cognitive, social, and affective skills within these definitions, PL offers a potentially powerful lens for examining movement in relation to physical activity (PA), motor skill outcomes, and broader social, cognitive, and affective processes. We argue that motor performance alone is not sufficient for learning if it is not linked experientially to positive emotional states (pleasure), which leads to a desire to repeat the skill and use it to engage in other activities such as sports (motivation), all within a particular social context or physical environment. While we can separate these elements for empirical consideration, they are experienced holistically and without, necessarily, conscious reflection. In other words, this multidimensional, experiential convergence must be conceptualized as a (interactive) process, rather than reduced to its constituent components that together describe an experience.

1. Physical Literacy in Educational Contexts

Physical literacy is a concept that has gained increasing relevance and popularity in recent years, both globally and locally, helping to delineate new directions for educational research, educational project development and interaction with extracurricular sports, as well as in other educational settings.

It is a learning process that enables each child to build a motor and language background, starting with basic motor patterns, in accordance with his or her own developmental rhythms and in relation to the opportunities provided by the surrounding environment (family, school, community).

Physical literacy has been described as a crucial step in fostering long-term participation in physical activity in various educational settings, such as school, sports, leisure, and the health sector - the latter focusing on the prevention and treatment of non-communicable diseases (Cairney et al., 2019). It is a fundamental educational process that aims to develop in individuals a deep and conscious relationship with movement (Pascali & Monacis, 2024). It is not just about learning motor skills, but promoting a holistic approach that involves the body and mind, fostering the person's physical, cognitive, emotional, and social growth.

This concept, increasingly recognized internationally, emphasizes that movement is not an end in itself, but a mean of acquiring skills that improve quality of life, health and overall well-being.

In the educational context, physical literacy is distinguished by its emphasis on building intrinsic motivation and awareness of movement, transforming physical activity into an integral part of daily life (Pascali, Monacis, 2024). Moreover, physical literacy as an educational process is a resource for the future: it educates young people to have a positive and lasting outlook toward movement, with the goal of promoting an active lifestyle that can continue well beyond the school years.

Through education geared toward physical literacy, students learn not only how to practice physical activity, but also to understand the benefits and implications of movement for their physical and mental health, developing skills that will positively influence their well-being and quality of life (SISMeS, 2024).

Students are encouraged to recognize the intrinsic value of physical activity and develop a positive relationship with their bodies, gaining awareness of their abilities and limitations and learning to overcome challenges (Pascali, Monacis, 2024).

Nowadays, the scientific literature presents numerous definitions and interpretations of the term *Physical Literacy*, highlighting the lack of a unanimous consensus on how to apply it in educational practice (Martins et al., 2020). In this regard, the study by Martins et al. (2020) highlighted the variety of definitions, perspectives involved (school education, sports, public health) and organizational

arrangements, underlining how scientific and educational research frequently proceeds in a fragmented manner, without a unified approach. Indeed, studies and experiences are often isolated and not always interconnected, taking an analytical rather than a comprehensive approach to each individual's educational process.

Beginning with Whitehead's (2013), additional definitions have emerged that, while appearing similar, highlight different aspects and constituent factors of physical literacy - such as motor, cognitive, emotional-affective, and social, and the contexts in which physical literacy is developed. Physical literacy, therefore, is a complex concept that promotes in learners an understanding of the benefits of physical activity, not only in terms of health, but as an indispensable element of mental and physical well-being at all ages. It involves the acquisition of basic motor skills, an understanding of the principles of physical efficiency, knowledge of the rules of games and sports, and the ability to make informed decisions about the physical activity to be performed in various contexts.

At a time when the study of new technologies often occupies the center of educational debate, it is crucial not to overlook the importance of physical literacy in the educational process. Physical literacy goes beyond the teaching of sports skills or the development of physical efficiency: it takes the form of a true educational process that begins as early as kindergarten and continues throughout the primary education cycle. In fact, motor experiences involving the body become fundamental moments to mediate the educational process and to intervene didactically, which are necessary for learning not only the disciplines, but also transversal skills.

Physical literacy can thus be viewed as a process of acquiring and developing motor skills, which enable the individual to express his or her own repertoire of skills and knowledge, as well as to interact effectively in the socio-cultural context around them (Martins et al., 2020; O'Sullivan et al., 2020).

2. Physical literacy as a key element in quality physical education

Quality physical education values physical literacy as a key developmental goal for the overall growth of the individual. This type of literacy not only fosters body awareness and the development of physical skills, but also promotes pleasure and interest in physical activity. It represents, especially in elementary school, a unique opportunity for children to explore movement in a structured and intentional environment that links motor experiences to other forms of learning, creating meaningful connections with other cognitive areas (Colella, 2018). In this way, physical education facilitates a comprehensive educational process that is not limited to the physical dimension but also embraces the child's cognitive, emotional, and social development. Through learning motor skills and

increased opportunities to participate in engaging physical activities, children experience movement as a means of personal expression and growth. In the teaching practice, to ensure the excellency of physical education, it is essential that teachers pay attention to the methods and tools used, as well as the level of effectiveness with which the objectives of the discipline are pursued. The meanings and values assigned to the body and movement become fundamental in conveying to students not only technical skills, but also a positive approach toward physical literacy.

The importance of distinguishing between physical literacy and motor activity is underscored by Whitehead, who offered the definition of physical literacy as *motivation, confidence, physical competence, knowledge, and understanding to evaluate and engage responsibly in physical activities for life, in relation to each person's capabilities*. More directly, if we are to embrace the concept of physical literacy, then it should be viewed not as an outcome-oriented end point, but presented as a process-oriented journey throughout the life course (Whitehead, Almond, 2013) influenced by a unique set of interacting constraints encountered by each individual.

Through this lens, physical literacy is seen not as a set of motor skills and components of *acquired* skills, but an evolving concept that could positively impact the mental and physical well-being of individuals throughout childhood, adulthood, and old age (O'Sullivan, Davids, Woods, Rothwell, & Rudd, J. (2020). Motivation and self-confidence, along with competence, knowledge, and understanding, form a set of essential factors that, when harmoniously combined, enable an individual to advance along the path of developing his or her motor and physical skills.

In a broader perspective, the World Health Organization (WHO, 2020), in its Global Plan of Action for the Development of Quality Physical Education 2018-2030, also emphasizes the importance of physical literacy as a means of achieving the United Nations Sustainable Development Goals. According to the World Health Organization (WHO), physical activity is defined as *any bodily movement produced by skeletal muscles that requires energy expenditure*. Physical literacy has become a key goal of physical activity (Giblin, Collins & Button, 2014) and, as such, is presumably an antecedent of physical activity, while also being developed through physical activity. It has been consistently shown that physical activity generates significant health benefits, such as reducing the likelihood of cardiovascular disease, diabetes, and cancer WHO highlights the need to integrate physical activity into all aspects of daily life, promoting not only sports and recreation, but also movement as a means of transportation and as a daily practice for a healthier lifestyle.

Physical literacy becomes, in this sense, the main objective of quality physical education.

This goal is embodied in four strategic areas: the promotion of active societies, active environments, active people, and active systems. In the school setting, it is essential to identify specific times of the day when physical activity can be encouraged, such as introducing active games and movement breaks during class, organizing extracurricular sports activities, and engaging students in activities that encourage them to walk or bike to school.

A quality physical education program, then, offers a variety of carefully planned learning experiences. These include sports skill development, outdoor physical activity exploration, dance, and gymnastics, all aimed at enhancing motor skills. The focus on developing educational goals and learning outcomes ensures that all children, regardless of ability level, can gain a solid foundation of motor experiences and knowledge. Well-structured physical education programs, therefore, expand opportunities to develop motor skills in young people, encouraging them to engage in active lifestyles and make healthy choices that will accompany them throughout their lives (Whitehead, 2013). The concept of physical literacy has, for these reasons, become a key element in the development of quality physical education programs globally. In this regard, the Canadian Sport Centre has developed a long-term growth model for its athletes, known as the *Long Term Athlete Development model* (LTAD). This model views physical literacy as the foundation of skills, knowledge and attitudes necessary for children to develop an active and healthy lifestyle. The LTAD model describes physical literacy as *the development of fundamental motor and sports skills that enable a child to move with confidence and control in a wide variety of physical, rhythmic, and sporting activities* (Dowling & Washington, 2021). Physical literacy also includes the ability to interpret context and respond appropriately to situations, developing not only technical skills but also adaptive and responsive skills.

3. The role of teachers

Teachers, perhaps more than any other educational figure, have the ability to guide students on their path to personal growth, social development and the acquisition of healthy and active life habits. The teacher's role is to design, guide and support pupils' engagement in experiences that are both fulfilling and meaningful, helping them build strong self-esteem and self-respect (Whitehead, 2013). It is essential that the teacher's approach focuses on motivation, a key element in engaging children and youth in physical activities in a deep and lasting way.

Motivated students are eager to learn, participate energetically in learning activities, and develop strong confidence in their own abilities. They are determined to complete tasks, tackle goals steadily and welcome challenges with

enthusiasm, experimenting with varied learning strategies and maintaining high expectations for success.

In contrast, the lack of motivation reduces students' perceived sense of self-efficacy, thus hindering progress in motor skills.

To create a motivating climate, teachers should structure the physical education lesson with varied and challenging motor tasks, encouraging learner autonomy, recognizing demonstrated effort, promoting group collaboration and cooperation, and managing learning time flexibly. By adopting these principles, the teacher can foster in students a perception of a skill-oriented environment, with the goal of enriching motor experiences and maintaining high motivation to practice physical activities in varied settings and at all ages (Morgan, Sproule & Kingston, K. 2005). In addition, the teacher must develop an awareness that working directly with bodily experience gives motor education an important pedagogical role, integrating it into an educational process that addresses the person at the most relevant stages of his or her physical, cognitive and identity development. This approach places the body and motor skills at the center of education, making the body itself a medium of communication and relationship, which acquires significant educational value.

Pedagogical strategies to promote high-quality physical education teaching include specific aspects and characteristics of the proposed lesson:

1. Encouraging fun - Offer activities that are enjoyable and engaging, stimulating in students the joy of moving.
2. Diversifying instructional offerings - Vary activities to meet the different needs, abilities and interests of pupils.
3. Carefully planning the lesson - Organize activities in a way that maximizes engagement and learning effectiveness.
4. Promoting the values of sports - Use sports as a tool to teach values such as loyalty, respect and cooperation.
5. Enhancing individual skills - Provide opportunities for students to practice and develop their skills.
6. Encouraging creative thinking - Stimulate the use of innovative solutions and creativity within motor activities.
7. Educating for health and an active lifestyle - Teaching the importance of regular physical activity for a healthy and active life.

Through the implementation of these strategies, teachers can create an educational pathway that is not limited to the physical dimension, but positively

affects the integral development of students, supporting them in building a healthy and lasting relationship with physical activity.

Conclusions

School reforms have not yet resolved the issue of the constant presence of the physical education specialist teacher, and different experiments and organizational approaches have alternated over time. Due to the lack of a clear and consistent methodological reference in the curriculum, it is often difficult to accurately assess outcomes in terms of learning, motor development and the educational process. Several problems continue to persist, including: a. the integration of motor activities into the annual class/school curriculum, especially with regard to interdisciplinary and cross-curricular objectives; b. the relation between the proposed motor activities, educational objectives and teaching styles; c. the adoption of a system of physical literacy assessment; d. the joint training of generalist and specialist teachers; and e. the integration of school activities with motor and sports activities in the area.

The development of physical literacy in school, therefore, requires training interventions structured on several levels, coordinated and synergistic, where the quality of physical education teaching is the main cultural reference. In conclusion, physical literacy is a crucial goal for a physical education that aims to prepare young people not only for a physically active life, but also to face daily challenges with competence and awareness.

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