PHYSICAL LITERACY: AN INTEGRATED MODEL FOR THE EDUCATIONAL PROCESS IN ITALIAN SCHOOLS

ALFABETIZZAZIONE MOTORIA: UN MODELLO INTEGRATO PER IL PROCESSO EDUCATIVO NELLE SCUOLE ITALIANE

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ABSTRACT

Physical literacy represents a crucial aspect of the educational journey for children and young people. This article explores existing models of physical literacy, their applications in the Italian school context, and teaching methodologies aimed at students with special educational needs. The objective is to propose an integrated approach that can be adopted in the Italian educational system.

L'alfabetizzazione motoria - Physical Literacy- rappresenta un aspetto cruciale del percorso educativo fin dalla scuola dell'infanzia. Questo articolo esplora i modelli esistenti di alfabetizzazione motoria, le loro applicazioni nel contesto scolastico italiano e le metodologie di insegnamento rivolte a studenti con bisogni educativi speciali. L'obiettivo è proporre un approccio integrato che possa essere adottato nel sistema educativo italiano.

KEYWORDS
Pedagogy; education; physical literacy; teaching-learning process
Pedagogia; educazione; alfabetizzazione motoria; educazione fisica; apprendimento motorio.

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Introduction

Physical literacy (PL) is a key concept in physical education that has gained increasing importance internationally in recent years (Corbin, C. B. 2016). As a gateway to participation in physical activity and sports, PL goes beyond simple motor skills, involving motivation, confidence, knowledge, and awareness to maintain an active lifestyle (Whitehead, 2013). Despite its significance, PL is still not uniformly integrated into educational systems, especially in Italy, where educational practices are often fragmented and lack a common approach (Cairney et al., 2019). In Italy, the principles of PL align closely with the National Guidelines for the Curriculum (Indicazioni Nazionali per il Curricolo), which emphasize a holistic and inclusive vision of education. Furthermore, laws such as Law 170/2010 on Specific Learning Disorders (DSA) and the guidelines for Special Educational Needs (SEN 2012) provide a robust framework for fostering inclusive educational environments that support diverse student needs. These legislative and policy measures highlight the potential of PL to enhance not only physical competence but also the social and emotional development of all students, including those with special educational needs (SEN).

This article aims to analyze the current pedagogical and methodological debate on PL, presenting intervention models and best practices already experimented with internationally and comparing various educational implications, especially concerning students with special educational needs (SEN). In conclusion, the article will propose an integrated model that can be adapted to the Italian school context, promoting a unified and inclusive approach.

1. Analysis of the Pedagogical Debate

Physical literacy is a multidimensional concept that has sparked a lively debate in the educational field. The most established interpretation, proposed by Whitehead (2013), defines it as a combination of skills, motivations, and knowledge that allows individuals to adopt a physically active lifestyle. Other authors, such as Cairney et al. (2019) and Shearer et al. (2018), have further explored the concept, emphasizing its various constitutive factors: motor skills, psychological, social, and cognitive aspects, and interaction with different educational settings. In the Italian context, the fragmented nature of the educational approach emerges from the multiplicity of interpretations and the absence of a shared model for teaching physical education. The use of diversified methodologies in different educational and sports contexts, sometimes disconnected from each other, makes it difficult to identify a coherent educational path. This lack of uniformity is also reflected in teacher

training, as educators often do not receive specific preparation in PL, leading to educational practices not always aligned with international standards. In various countries such as the UK and Canada, Physical Literacy models have been developed that involve an integrated and interdisciplinary approach. These models include not only the development of basic motor skills but also the promotion of an inclusive educational environment and attention to the needs of students with special educational needs (Howse E. R. 2024). However, in Italy, the pedagogical discussion on PL remains at an initial stage, often focusing on specific aspects without embracing a holistic vision of the educational process.

2. Models of Didactic Intervention

International Physical Literacy models vary depending on socio-cultural contexts and available resources. In the United Kingdom, for example, Whitehead's model is based on a holistic approach, focusing on the development of motor, cognitive, emotional, and social skills. Students are encouraged to explore different forms of movement, gradually developing awareness and confidence in their motor abilities. This model emphasizes the individuality of the learner, focusing on intrinsic motivation and valuing the motor experience rather than the mere acquisition of skills. In Canada, the "Physical Literacy for Life" program aims to engage children and adolescents in physical activities through experiential learning (Tremblay M. S et al. 2018). Teachers are trained to create a positive and inclusive learning environment, where physical activity is seen as an opportunity to develop social and cognitive skills in addition to motor abilities. The program's flexibility allows it to be adapted to various educational contexts, considering the different needs of students, including those with special educational needs. Australia has developed a more structured and assessment-oriented model called the "Physical Literacy Continuum." This model provides a gradual development path for motor skills, divided into stages that reflect students' progress throughout the school years (Macdonald, D., & Enright, E. 2013). Teachers use assessment tools to monitor the skills acquired, providing continuous and personalized feedback to students. The Australian approach places great emphasis on integrating PL into the school curriculum and on collaboration between teachers, parents, and the community. While these models differ in structure and implementation, they share the common goal of promoting Physical Literacy that goes beyond the acquisition of physical skills, encompassing personal, social, and cognitive growth. In Italy, such models could be adapted to the school context through specific teacher training programs and the integration of physical activities into existing educational programs.

3. Educational and Methodological Implications

The introduction of a Physical Literacy model in Italian schools has various implications on both the educational and methodological levels. First, adopting a holistic approach to PL requires a revision of traditional teaching practices, shifting them toward a student-centered physical education (Whitehead, 2010). This implies the need to train teachers not only on motor skills but also on managing inclusive learning environments where each student can develop their abilities individually (Bailey et al., 2009). Another central aspect concerns the attention to students with special educational needs (SEN). PL provides a methodological framework that facilitates inclusion, as it values individual differences and promotes the active participation of all students (Kirk, 2013). The proposed activities should be adaptable, offering different levels of difficulty and ways of participation, allowing each student to experience success and develop self-esteem (Wallhead & O'Sullivan, 2005). From a methodological point of view, it is important to adopt active and participatory teaching strategies, such as cooperative learning, problem-solving, and peer tutoring (Casey & Goodyear, 2015). These strategies promote not only the acquisition of motor skills but also the development of social skills and awareness of the importance of an active lifestyle (Dyson et al., 2004). The use of formative assessment tools, such as motor diaries or observation grids, allows teachers to monitor students' progress and adapt activities to their specific needs (Hay & Penney, 2013). Finally, creating an Italian model of Physical Literacy requires the active involvement of the entire school community, including parents, sports operators, and health professionals (Whitehead, 2013). Integrating motor literacy pathways into the educational system can help create a more inclusive learning environment focused on the overall well-being of individuals (Ennis, 2011).

4. Physical Literacy and Disabilities: Inclusion in Italian Schools

Physical literacy (PL) is uniquely suited to support students with disabilities, helping them engage in physical education while fostering confidence, skill-building, and a lifelong appreciation for active living (Goodwin & Watkinson, 2000). Italy has a strong commitment to inclusive education, evident in its legal framework and educational policies (D'Alessio, S. 2011). Compared to other countries, Italy is at the forefront of integrating students with disabilities into mainstream schools, placing a high priority on creating inclusive environments where every student is valued and supported (Ianes et al., 2020). Italian schools view inclusion not as a separate category of education but as a core aspect of educational philosophy (Florian, L. 2014). This perspective aligns with the goals of physical literacy, which emphasizes

adaptability, personal growth, and the value of movement for all individuals. PL activities are designed to meet students where they are in terms of ability, offering modifications and flexibility that allow students with disabilities to participate fully and feel a sense of accomplishment (Lieberman et al., 2002).

5. Comparison with Other Countries

While Italy is recognized for its inclusive approach, other countries often take a more segregated approach to physical education for students with disabilities (Rouse et al., 2012). For instance, some educational systems offer separate PE classes for students with disabilities, potentially limiting opportunities for social interaction and peer support (Block & Obrusnikova, 2007). Although these programs may be beneficial in providing specialized instruction, they can inadvertently reinforce a separation that Italy's model aims to dissolve (Goodwin & Watkinson, 2000). Italy's example highlights that, with the right support and a commitment to adaptability, students of all abilities can participate in and benefit from physical education that nurtures their development, fosters self-confidence, and prepares them for an active life. Italian schools that integrate PL in this inclusive way are building a foundation for a future where every student, regardless of ability, feels capable, confident, and ready to engage actively in society (Ennis, 2011).

6. Best Practices in Implementing Physical Literacy in Italian Schools

Italian schools are increasingly adopting best practices from international physical literacy models, adapting them to Italy's inclusive and holistic educational framework (Whitehead, 2013). A critical element of these practices is the development of a safe, supportive environment where students are encouraged to explore and engage with movement in a way that promotes their individual strengths (Florian, 2014). Teachers are trained to create flexible lesson plans that cater to students of all abilities, often involving multi-sensory learning experiences that make physical activities more accessible and engaging. For example, teachers might use visual, auditory, and tactile cues during activities to ensure students understand each exercise, enhancing accessibility for students with sensory or cognitive challenges. Additionally, Italian schools prioritize continuous feedback, allowing students to reflect on their progress and set personal goals (Hay & Penney, 2013). This student-centered approach ensures that each student, regardless of their starting point, feels valued and motivated to engage in physical activity, fostering an enduring relationship with movement and health (Bailey et al., 2009).

7. Addressing Barriers to Physical Literacy in Italy

Despite Italy's progress in promoting physical literacy, several barriers remain. Limited resources, variations in teacher training, and infrastructural challenges in some regions can hinder the consistent application of PL principles across the country (D'Alessio, S. 2011). For instance, schools in rural areas may face challenges in accessing professional development programs or resources for adaptive physical education equipment. Addressing these disparities requires collaborative efforts between government bodies, educational institutions, and local organizations to ensure equal access to high-quality PL programs for all students. Another barrier is the limited awareness among some parents and communities about the importance of physical literacy beyond traditional physical education (Whitehead, 2010). Public awareness campaigns and family-focused PL events could help bridge this gap, educating communities about the broader benefits of PL for children's physical, social, and cognitive development. By raising awareness and providing targeted resources, Italy can overcome these barriers and make physical literacy a universally accessible component of education (Casey & Goodyear, 2015).

8. Future Directions for Physical Literacy in Italian Education

Looking to the future, Italian schools are poised to expand their physical literacy initiatives, integrating new research and technologies to enhance inclusivity and student engagement (Palumbo, R et al.2016). One promising area is the incorporation of digital tools, such as apps or interactive devices, that allow students to track their physical activity and set personal fitness goals (Galy, O. et al. 2019). These tools could make PL more dynamic, encouraging students to take greater ownership of their health and well-being. Furthermore, collaborations with sports organizations and health professionals can provide students with enriched learning experiences that connect physical literacy to real-world applications. For instance, partnerships with local sports clubs could offer students extracurricular opportunities to practice and refine their skills in a supportive, community-based setting (Whitley, M. A. et al.2015). Through these initiatives, Italian schools can continue to evolve PL education, ensuring that it remains relevant, accessible, and impactful for future generations.

9. Integrating Physical Literacy into Teacher Education Programs

To sustain the growth of physical literacy in Italian schools, it is essential to integrate PL principles into teacher education programs. By embedding physical literacy within teacher training curricula, Italy can prepare educators to deliver

adaptive, student-centered physical education from the outset of their careers (Latino, F. et al. 2024). This approach would equip teachers with a comprehensive understanding of PL, including its physical, cognitive, and emotional components, as well as techniques for supporting students with diverse needs (Orlich, D. C. et al. 2010). One practical application is to introduce courses or certifications focused specifically on inclusive physical education and adaptive methodologies. These courses would cover strategies for modifying activities, assessing student progress, and collaborating with special education professionals to ensure that every student benefits from physical literacy initiatives. Teacher education programs that emphasize these areas will be instrumental in fostering a new generation of educators who are well-prepared to champion physical literacy and inclusion.

10. Research and Evidence-Based Approaches in Physical Literacy

As physical literacy gains traction in Italy, there is an increasing need for evidence-based approaches to inform best practices and policy decisions. Research initiatives that track the outcomes of PL programs across different age groups and regions can provide valuable insights into effective strategies, areas for improvement, and the long-term benefits of physical literacy on students' well-being (Carl, J. et al. 2023). Universities and educational research institutions can play a key role by conducting studies that evaluate the impact of PL on students' physical, social, and academic development. Moreover, Italy could benefit from establishing a centralized database where schools can share their experiences and best practices, fostering a collaborative environment that drives continuous improvement (Dominic, O., & Michele, R. 2015). By investing in research and creating knowledge-sharing platforms, Italy can build a robust foundation for physical literacy that adapts to emerging needs and insights over time.

11. Concrete Examples of Good Practices in Italy for Physical Literacy

Physical literacy is gaining increasing attention in Italian schools, where various educational initiatives promote inclusion and the development of motor skills through innovative approaches. Below are some concrete examples of good practices in Italy:

1. *Giocosport in Primary Schools*

In many Italian primary schools, the "Giocosport" program has been adopted, promoting non-competitive playful activities to introduce basic motor skills (Calamusa, J., 2018). This program focuses on inclusivity, allowing all students to participate regardless of their physical abilities. The Ministry of Education has

highlighted the importance of such approaches in fostering the integration of students with special educational needs (MIUR, 2018).

2. *Adaptive Physical Education in Lombardy*

In secondary schools in Lombardy, some schools have implemented adaptive physical education programs for students with disabilities. A significant example involved the use of sensory and motor circuits to develop balance, coordination, and spatial awareness (Greco, G. et al. 2017). These activities were supported by peer tutoring systems, which helped improve motor skills and promote social inclusion (Capranica et al., 2019).

3. *Outdoor Education in Trentino-Alto Adige*

In some schools in the Trentino-Alto Adige region, outdoor physical education has been integrated to strengthen students' connection to nature while promoting physical literacy (Bosoni, M. 2019). Activities such as hiking, rock climbing, and orienteering aim to enhance motor skills while fostering environmental awareness and problem-solving abilities. Teachers reported improvements in physical confidence and a deeper appreciation for the natural world among students (Di Lorenzo & Salvatori, 2022).

4. *School-Based Sports Clubs for All in Rome*

In Rome, the "Sport per Tutti" initiative was launched to create inclusive, after-school sports clubs in primary and secondary schools. These clubs offer various activities, from football to gymnastics, catering to students with diverse abilities. The program emphasizes participation over competition, allowing students to explore and develop physical skills at their own pace. This approach has been successful in increasing physical activity levels among students who might not typically engage in competitive sports (Vitali et al., 2021).

5. *Mindfulness and Movement Integration in Milan*

A unique approach has been adopted in some schools in Milan, where mindfulness practices are integrated with physical activities. This combination of mental and physical engagement, including yoga and Tai Chi, has been proven to improve focus, motor coordination, and emotional regulation. Students practicing these techniques not only enhance their physical literacy but also develop a holistic understanding of well-being (Galli & Piccini, 2020).

6. *Active Play Programs in Naples*

In Naples, schools have introduced active play programs designed for younger students, which involve obstacle courses, dance, and team sports that encourage both physical development and social interaction. These activities are designed to be adaptable to the needs of students with different physical and cognitive abilities,

helping children build motor skills in a fun, inclusive environment (Bertozzi et al., 2020).

7. *Inclusive Sports for All Ages in Sardinia*

In Sardinia, the "Sport per Tutti" program has expanded beyond school-aged children to include students with disabilities in inclusive sport competitions. The initiative provides opportunities for all students, regardless of ability, to participate in organized team sports such as basketball and volleyball. This has helped foster a greater sense of community and collaboration among students from diverse backgrounds (Bertozzi et al., 2020).

8. *Integrating Physical Literacy into School Curriculum in Puglia*

In Puglia, schools have integrated physical literacy into the curriculum by combining physical education with academic subjects such as geography and history. For example, students explore the region's history and culture through physical activities like traditional dances, fostering both motor development and cultural understanding. This interdisciplinary approach has contributed to the development of a more well-rounded educational experience for students (Lundvall, 2015).

9. *Physical Literacy in the Arts in Florence*

In Florence, some schools have integrated physical literacy with the arts, using dance and expressive movement to enhance motor skills and body awareness. These programs, often led by trained dance instructors, encourage students to explore creative movement, improving both their physical abilities and their emotional and cognitive development. This approach has helped students to not only develop coordination but also engage in artistic expression (Kirk, 2010).

10. *Aquatic Physical Education in Venice*

Schools in Venice have implemented aquatic programs to promote physical literacy, particularly among younger children. Swimming and water games are used as tools to develop motor coordination, strength, and stamina, while fostering a sense of confidence in the water. These programs are particularly beneficial for students who may struggle with traditional land-based physical education activities, offering an alternative approach to developing physical skills (Wallhead & O'Sullivan, 2005).

Conclusions

Physical Literacy represents a fundamental concept for promoting an active lifestyle and the overall well-being of individuals. An analysis of international models reveals the importance of a holistic and inclusive approach that involves motor, social, cognitive, and emotional skills. In the Italian context, the introduction of an integrated Physical Literacy model could offer a significant contribution to student

education, especially for those with special educational needs (SEN). To effectively implement Physical Literacy in Italian schools, a change in perspective is needed, involving not only physical education teachers but also the entire school community. Teacher training must focus not only on developing motor skills but also on creating inclusive learning environments where each student can explore and develop their skills in a personalized way. Promoting an Italian model of Physical Literacy also requires special attention to curricular integration and collaboration among schools, families, and the sports community. This holistic vision can help create an educational pathway that encourages students to maintain an active lifestyle in the long term, enhancing their physical, emotional, and social well-being. In conclusion, Physical Literacy is not just a set of motor skills but a comprehensive educational process that can guide students toward greater self-awareness and their relationship with physical activity. Adopting a national model could represent a significant step forward for physical education in Italy, helping to form active and aware citizens. Certainly, here's a section focused on disabilities and physical literacy, emphasizing the inclusive.

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