DEVELOPING MOTOR SKILLS AND STIMULATING THE MOTIVATION OF STUDENTS IN PRIMARY SCHOOL THROUGH A DIDACTIC PROPOSAL BASED ON PHYSICAL LITERACY

SVILUPPARE LE COMPETENZE MOTORIE E STIMOLARE LA MOTIVAZIONE DEGLI STUDENTI NELLA SCUOLA PRIMARIA ATTRAVERSO UNA PROPOSTA DIDATTICA BASATA SULL'ALFABETIZZAZIONE MOTORIA

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ABSTRACT
Physical literacy is a vital component of child development, as it supports motor skills, confidence, and motivation toward an active lifestyle. This experimental study investigates the progress in physical literacy among primary school students using the CAPL-2 (Canadian Assessment of Physical Literacy), a tool enabling comprehensive assessment of motor skills and motivation, both crucial for a healthy lifestyle. A sample of 60 pupils aged 8-10 participated in a 12-week program supervised by a qualified physical education teacher. The qualitative and quantitative analyses revealed significant improvements in students' motor skills and motivation, highlighting the importance of structured, inclusive programs to sustainably foster physical literacy.

L'alfabetizzazione motoria è una componente essenziale dello sviluppo del bambino, poiché sostiene non solo le abilità motorie, ma anche la fiducia e la motivazione verso uno stile di vita attivo. Questo studio sperimentale indaga i progressi nell'alfabetizzazione motoria degli studenti della scuola primaria utilizzando il CAPL-2 (Canadian Assessment of Physical Literacy), uno strumento che permette una valutazione completa delle competenze motorie e della motivazione, aspetti chiave per uno stile di vita salutare. Un campione di 60 alunni di età compresa tra 8 e 10 anni ha partecipato a un programma di 12 settimane supervisionato da un docente qualificato di scienze motorie. L'analisi qualitativa e quantitativa ha mostrato miglioramenti significativi nelle abilità motorie e nella motivazione degli studenti, evidenziando l'importanza di programmi didattici strutturati e inclusivi per sostenere l'alfabetizzazione motoria in modo sostenibile.

KEYWORDS
Physical Literacy, Primary School; Motor Skills; Student Motivation; Structured Didactics
Alfabetizzazione Motoria, Scuola Primaria; Competenze Motorie; Motivazione dello Studente; Didattica Strutturata

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Introduction

Physical literacy is defined as a set of motor skills, confidence and motivation that enable an individual to participate satisfactorily in physical activities (Edwards et al., 2019). During childhood, improving motor skills has significant implications not only for physical development, but also for the child's emotional and social sphere. Recent studies highlight how good physical literacy is closely related to the formation of healthy lifestyle habits and the reduction of sedentary risk, especially in adulthood (Graham & Holt, 2021; Shearer et al., 2023). Contemporary literature suggests that physical literacy has a positive impact on general well-being and resilience development, while contributing to the improvement of students' socialisation and self-efficacy (Longmuir et al., 2020; Rodriguez & Kim, 2024). Physical literacy, however, is not limited to physical development. According to Whitehead (2010), it also involves building an inner awareness regarding movement and the perception of one's own body in space, fostering the internalisation of values related to respect for one's own health and physical well-being. Hence the importance of adopting educational program that develop physical skills and reflexive and motivational abilities in parallel. The positive influence of such program is documented by several studies that show that physical education in primary school can promote better self-perception and increase motor readiness also outside the school setting (Cairney et al., 2020; Bennett et al., 2023).

The CAPL-2 (Canadian Assessment of Physical Literacy) is an internationally validated instrument for assessing physical literacy in children. It includes four main areas: physical skills, motivation and confidence, movement knowledge and physical behavior (Tremblay et al., 2018). The choice of the CAPL-2 as the assessment tool in this study lies in its ability to provide a comprehensive picture of participants' motor skills and motivational components, addressing the need to identify personalised approaches that encourage children's active and positive participation in physical activity (Saito & Meyer, 2023).

This study aims to assess, through a 12-week physical literacy program, the level of motor skills and motivation among primary school students, highlighting the importance of structured and inclusive educational interventions to promote a movement culture from a young age.

1. Research Structure: Participants, Methodology, Evaluation and Educational Intervention

The study sample included 65 students aged between 8 and 10 years, attending a primary school and consisting of 27 boys and 38 girls. The participants presented a heterogeneous level of motor skills, including children with previous sports experience and others unfamiliar with physical activity. The diversity of socio-cultural backgrounds and socio-economic conditions made it possible to explore how different family and environmental contexts may influence both motivation towards movement and the acquisition of motor skills. Each family signed an informed consent, and the school actively collaborated to ensure a safe and inclusive environment.

To assess the students' motor skills and motivation, the **CAPL-2**, an internationally recognised assessment tool for physical literacy, was used. The CAPL-2 includes a series of physical tests (such as jumping, running and balance) and motivational questionnaires that assess students' interest and confidence in physical activity (Longmuir & Tremblay, 2020). In addition, a motor diary was used in which each student jotted down reflections on their activities and emotions; the in-depth and structured content analysis of this instrument enriched the methodological approach of the research with a qualitative analysis.

The teaching protocol included a 12-week physical literacy program, with two weekly physical activity sessions of 45 minutes each, led by a teacher specialised in motor sciences. The activities were designed to be inclusive, adaptable and challenging, responding to the different ability levels and preferences of the students. The program was divided into weekly modules, each with specific objectives, such as coordination and cooperation, and progressively more complex activities to encourage the development of a variety of motor skills. The teacher provided constant feedback to ensure the active participation of all students.

Specifically, the teaching activities were designed according to CAPL-2, which suggests a multidimensional approach to physical literacy, embracing physical skills, motivation, movement knowledge and physical behavior. The program focused on three main areas, each designed to foster comprehensive motor development and reflecting principles highlighted in existing literature, such as those of Edwards et al. (2019) and Tremblay et al. (2018). The following table specifies the areas of focus with their didactic-pedagogical objectives and proposed training activities.

Area of intervention	Pedagogical Educational Objectives	Learning Activities
Basic Motor Skills Development	Developing coordination, balance and locomotion, fundamental for gaining confidence and motor skills.	Balance pathways, body control exercises such as one-legged jumping and throwing and catching balls, jumping games and rolling and flipping activities were organised. The literature shows that improving these skills is crucial not only for motor performance, but also for increasing confidence in one's abilities (Longmuir et al., 2020). Throwing and receiving activities, for example, have been shown to be effective in improving hand-eye coordination, a skill considered crucial for later learning more complex sports (Cairney et al., 2020).
Group and Socialisation Games	Promoting cooperation, inclusion and a sense of belonging, important for both social skills and intrinsic motivation.	Team games were proposed as a simplified version of volleyball and basketball, where the rules were adapted to encourage the active participation of all students, regardless of skill level. These games, as pointed out by Shearer et al. (2023), help develop collaboration and communication skills among peers. Group games have been shown to be crucial in creating a cooperative environment that supports cohesion and a sense of belonging. The results

		reflect Bennett et al.'s (2023) theory that involvement in collective activities improves social skills and motivates children to actively participate.
Self-reflection and Intrinsic Motivation	Encouraging personal reflection on motor progress and promoting awareness and confidence in one's own physical abilities.	The students jotted down their experiences weekly in a diary, reflecting on the successes and difficulties they encountered. This reflection exercise, as suggested by Rodriguez and Kim (2024), helps to increase self-efficacy and awareness of one's progress. Students were also invited to participate in group discussions, led by the teacher, in which they could share their reflections and listen to those of their peers. CAPL-2 emphasises the importance of integrating self-reflection tools to boost children's motivation and confidence in their physical literacy journey.

Table 1: Didactic Programme

2. Results

The quantitative results derived from the CAPL-2 indicate a clear improvement in the students' motor skills. After the 12 weeks, the average score in jumping and running skills increased by approximately 30%, with a significant increase also in balance (+25%) (*p* < 0.01). Below is a summary table of the results.

Evaluation Category	Initial Average Score	Final Average Score	Percentage Increase
Jumping	58	75	+30%
Running	65	85	+31%
Balancing	70	88	+25%
Motivation	52	76	+46%

Table 2: Quantitative results

With regard to the students' reflections collected in the motor diaries, these provided important insights into how the physical literacy program influenced their perception and motivation towards physical activity. Many children described a sense of progressive improvement and confidence, with statements such as 'At first I thought I couldn't do it, but after a few lessons I feel stronger and more confident' and 'I used to be afraid of falling, but now I enjoy trying new movements.' These comments reflect an increase in self-efficacy, in line with the results observed quantitatively, and emphasise how regular participation and positive feedback can strengthen the children's confidence in their motor skills.

In addition to confidence, intrinsic motivation also emerged as a significant growth factor. Several students expressed enthusiasm in learning new skills, stating for example: 'I really like doing the obstacle course, every time I try to be faster' and 'My favorite game is throwing the ball, now I can catch it more often'. This motivation was reinforced over the weeks by the variety of activities and the involvement of the teacher, who was able to propose progressive and encouraging challenges.

Finally, the motor diary experience was perceived by the students as a useful tool to reflect on their successes and difficulties. Some of them noted how writing helped them to focus on the positive aspects, with expressions such as: 'When I write I realise that I did well and I feel happy' and "By reading the diary I monitor my progress, so I want to do better and better". These moments of self-reflection enabled the students to develop a greater awareness of their own motor pathway, consolidating their motivation and desire to actively participate in contexts other than school.

3. Discussion

The results of the physical literacy program, assessed by means of the CAPL-2, show a significant improvement in the motor skills and motivation of primary school students. These outcomes are in line with existing literature, which identifies physical literacy as an essential component for promoting physical activity and an active, healthy lifestyle from an early age (Cairney et al., 2020). This study highlighted how a structured teaching program, geared towards enhancing specific motor skills and stimulating students' intrinsic motivation, can contribute to the improvement of physical skills and children's motivated involvement in motor activities (Shearer et al., 2023).

The improvement of basic motor skills, such as jumping and running, confirms the importance of a progressive and inclusive approach. According to Longmuir et al. (2020), skills such as balance, coordination and dexterity are crucial for the later development of more complex skills. The study by Edwards et al. (2019) also suggests that specific training in motor skills contributes to greater self-confidence and stronger motivation to continue physical activity outside the school setting. In this sense, the significant increase in intrinsic motivation observed in the participants of this study confirms that strengthening physical skills is directly related to an improvement in students' psychological well-being (Graham & Holt, 2021).

The inclusion of self-reflection activities, through the motor diary, has proven particularly effective in increasing students' awareness and self-efficacy. Self-reflection, as highlighted by Rodriguez and Kim (2024), is a key component of meaningful learning, as it allows students to recognise their own progress and develop a deeper understanding of their abilities and areas for improvement. Furthermore, the motor diary has been an effective tool for monitoring students' self-assestment and motivation dynamics, making their progress visible in a concrete and measurable way (Tremblay et al., 2018).

In terms of socialisation, the results also confirm the positive role of PE in promoting social skills such as cooperation and mutual respect (Bennett et al., 2023). Group games fostered the creation of a cooperative environment in which every child could actively participate, regardless of their ability level, supporting a sense of belonging and strengthening group cohesion. This inclusive approach responds to the recommendations of Saito and Meyer (2023), according to whom an educational environment that values the active participation of all is crucial for increasing students' well-being and motivation.

A further important aspect that emerged from the analysis is the ability of the exercise teacher to adapt activities to the different needs of the students, helping to create a stimulating and pressure-free environment. This continuous support has proven to be crucial for the success of the program, as confirmed by numerous studies that emphasise the importance of positive feedback and teacher flexibility in fostering self-efficacy and engagement (Cairney et al., 2020; Shearer et al., 2023).

4. Conclusions

This experimental study highlighted the importance of physical literacy as an essential component of the primary school curriculum, demonstrating how a structured and calibrated program can have a positive impact not only on students' motor skills, but also on their motivation towards physical activity. The CAPL-2 test proved to be an effective and comprehensive assessment method, allowing for the precise measurement of progress in the different domains of movement and motivation, as already suggested by other benchmark studies (Longmuir et al., 2020; Cairney et al., 2020).

The findings emphasise that an educational intervention focused on physical literacy can contribute to developing a greater awareness in one's motor skills and a positive attitude towards physical activity, as also indicated by Graham and Holt (2021). This improvement is particularly significant considering that motivated and consistent participation in physical activity in childhood is associated with an active and healthy lifestyle in the long term, reducing the risks of developing chronic diseases in adulthood (Shearer et al., 2023).

Moreover, the approach adopted promoted not only the acquisition of fundamental motor skills, but also cooperation and positive peer interaction, aspects that foster an inclusive and participative learning climate. The involvement of the exercise teacher, who was able to adapt the program according to the needs of the students and provide constructive feedback, was essential for increasing the students' sense of self-efficacy and willingness to engage in motor activity (Tremblay et al., 2018). The opportunity to reflect on personal progress through tools such as the motor diary further enhanced students' sense of responsibility and awareness, elements that, as pointed out by Rodriguez and Kim (2024), are fundamental to authentic and sustainable learning.

In light of these results, it is confirmed that it is important to implement physical literacy programs that integrate moments of physical activity with personal and group reflection activities, creating a context in which students can develop both physical skills and emotional and social competences. The data collected support the idea that an integrated approach can be effective in promoting a positive relationship with physical activity, a factor that contributes to students' overall well-being.

In summary, this study confirms the value of the primary school as a key context for the promotion of physical literacy and physical and psychological health, highlighting the importance of institutional support for the development of educational programs that stimulate students to discover and enhance their motor skills in a conscious and rewarding way.

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