Developing Motor Skills and Boosting Primary School Students' Motivation Through a Didactic Program Grounded in Motor Literacy

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Abstract
Physical literacy is fundamental to children's growth because it cultivates movement competence, self-confidence, and the desire to maintain an active lifestyle. This experimental research explores changes in physical literacy among primary pupils through the Canadian Assessment of Physical Literacy, second edition (CAPL-2), which offers a holistic evaluation of both motor abilities and motivational factors critical to healthy living. Sixty students aged 8–10 took part in a 12-week program led by a certified physical-education instructor. Mixed-method analyses showed notable gains in motor proficiency and motivation, emphasizing the value of well-structured, inclusive initiatives for the long-term enhancement of physical literacy.

Keywords: *Physical literacy, Student; School.*

Introduction

Physical literacy refers to the integrated blend of movement competence, self-confidence, and motivation that equips a person to take part effectively in physical activity (Edwards et al., 2019). Strengthening motor proficiency in childhood has far-reaching effects that touch not only physical growth but also emotional and social development. Recent investigations show that solid physical literacy strongly correlates with the establishment of healthy lifestyle habits and with a reduced risk of sedentary behaviour later in life, especially in adulthood (Graham & Holt, 2021; Shearer et al., 2023). Current scholarship also points to its positive influence on overall well-being, resilience, social interaction, and self-efficacy among students (Longmuir et al., 2020; Rodriguez & Kim, 2024).

Physical literacy, however, extends beyond the body. Whitehead (2010) stresses that it involves cultivating an inner sense of movement and bodily awareness in space, thereby encouraging values of self-care and physical well-being. Consequently, educational initiatives should foster physical abilities alongside reflective and motivational skills. Numerous studies confirm that well-structured primary-school physical-education programs can elevate children's self-perception and readiness to be active outside school (Cairney et al., 2020; Bennett et al., 2023).

To measure physical literacy, this study adopts the Canadian Assessment of Physical Literacy, second edition (CAPL-2), an internationally validated instrument encompassing four domains: physical competence, motivation and confidence, movement knowledge, and physical behaviour (Tremblay et al., 2018). CAPL-2 offers a comprehensive view of children's motor and motivational profiles, supporting personalised strategies that encourage active and engaged participation (Saito & Meyer, 2023).

This research evaluates changes in motor competence and motivation among primary-school pupils after a 12-week physical-literacy program, underscoring the importance of structured, inclusive interventions in cultivating a lifelong culture of movement.

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

The research involved 65 primary-school pupils (27 boys and 38 girls) aged 8–10. Their motor competence was mixed: some children already practised organised sport, while others had little exposure to structured physical activity. Varied socio-cultural and economic backgrounds offered insight into how family and environmental contexts can shape both motivation for movement and the development of motor skills. Every family provided written consent, and the school cooperated closely to guarantee a safe, inclusive setting.

Motor competence and motivation were measured with the CAPL-2, a globally recognised physical-literacy assessment. CAPL-2 couples performance tests—such as jumping, running, and balance—with questionnaires that probe pupils' interest in and confidence toward physical activity (Longmuir & Tremblay, 2020). Each child also kept a movement diary, noting reflections on activities and emotions; systematic content analysis of these diaries added a qualitative layer to the study.

The intervention lasted 12 weeks, with two 45-minute sessions per week led by a motor-sciences specialist. Activities were inclusive, adjustable, and progressively demanding, catering to differing skill levels and preferences. Weekly modules focused on distinct goals—for instance, coordination or cooperation—and introduced gradually more complex tasks to cultivate a wide range of motor abilities. Continuous formative feedback ensured every pupil stayed actively engaged.

Aligned with the multidimensional CAPL-2 model—addressing physical competence, motivation and confidence, movement knowledge, and behaviour—the programme concentrated on three thematic strands designed to encourage holistic motor development, reflecting principles outlined by Edwards et al. (2019) and Tremblay et al. (2018). The table below lists each strand alongside its didactic–pedagogical objectives and sample training activities.

Table 1: Didactic Programme

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.

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.

Table 2. Quantitative findings

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%

The reflections recorded in the pupils' movement diaries offered valuable insight into how the physical-literacy programme shaped their perceptions and motivation toward physical activity. Many children reported steadily growing confidence, noting sentiments like, "At first I didn't think I could manage, but after a few lessons I feel stronger and more self-assured," and "I used to be afraid of falling, but now I enjoy trying new moves." These observations point to heightened self-efficacy—consistent with the quantitative outcomes—and illustrate how regular participation and positive feedback can reinforce belief in one's motor abilities.

Intrinsic motivation likewise emerged as a key area of development. Several pupils expressed excitement at learning fresh skills, writing, for instance: "I love doing the obstacle course; each time I try to go faster," and "My favourite game is throwing the ball—now I can catch it more often." Such enthusiasm was sustained by the variety of activities and by the teacher's ability to set progressively challenging yet encouraging tasks.

Students also viewed the diary itself as a helpful tool for reflecting on achievements and setbacks. Some remarked that writing focused their attention on positive aspects, with comments such as: "When I write, I realise I did well and feel happy," and "Reading my diary lets me track my progress, so I want to keep improving." These moments of self-reflection fostered greater awareness of their motor journey, strengthening their motivation to take part in physical activity beyond the school environment.

3. Discussion

CAPL-2 data indicate marked gains in both motor competence and motivation among the primary-school pupils who took part in the physical-literacy programme. These findings echo prior research that positions physical literacy as a cornerstone for encouraging regular activity and sustaining a healthy, active lifestyle from early childhood (Cairney et al., 2020). The present study demonstrates that a carefully structured curriculum—designed to refine targeted motor abilities while nurturing pupils' intrinsic drive—can simultaneously enhance physical proficiency and motivate children to engage enthusiastically in movement (Shearer et al., 2023).

Progress in foundational skills such as running and jumping underscores the value of a gradual, inclusive methodology. Longmuir et al. (2020) note that competencies like balance, coordination, and dexterity underpin the later acquisition of more advanced movements. Likewise, Edwards et al. (2019) report that focused skill training boosts self-confidence and encourages continued activity beyond the school environment. In line with these observations, the notable uptick in intrinsic motivation recorded here reinforces the link between strengthened motor abilities and enhanced psychological well-being (Graham & Holt, 2021).

Integrating self-reflection through the movement diary proved especially effective for heightening pupils' awareness and self-efficacy. As Rodriguez and Kim (2024) suggest, reflective practice is integral to meaningful learning, enabling learners to recognise progress and better understand their strengths and areas for growth. The diary also offered a practical

way to track self-assessment and motivation over time, rendering improvements visible and measurable (Tremblay et al., 2018).

Social outcomes further support the role of physical education in fostering cooperation and mutual respect (Bennett et al., 2023). Group activities cultivated an inclusive atmosphere in which every child could participate, regardless of skill level, bolstering belonging and group cohesion—consistent with Saito and Meyer's (2023) call for learning environments that value universal engagement.

Finally, the instructor's capacity to tailor tasks to diverse needs helped create a stimulating, low-pressure setting. Such ongoing support was crucial to the programme's success, corroborating findings that highlight the importance of adaptive teaching and constructive feedback in building self-efficacy and sustained engagement (Cairney et al., 2020; Shearer et al., 2023).

Conclusions

This quasi-experimental investigation underscores physical literacy as a vital pillar of the primary-school curriculum, showing that a well-planned, progressive programme benefits not only pupils' motor competence but also their enthusiasm for moving. The CAPL-2 proved to be a robust, multidimensional tool for tracking improvements across movement and motivational domains, confirming earlier benchmark research (Longmuir et al., 2020; Cairney et al., 2020).

Our evidence indicates that targeted physical-literacy instruction heightens children's awareness of their own abilities and fosters a positive disposition toward exercise—an outcome likewise noted by Graham and Holt (2021). Such gains matter because regular, motivated activity in childhood predicts an active, healthy lifestyle later on, lowering the odds of chronic illness in adulthood (Shearer et al., 2023).

Beyond honing fundamental skills, the programme nurtured cooperation and constructive peer interaction, creating an inclusive learning atmosphere. The teacher's capacity to tailor tasks and offer continual feedback proved pivotal in boosting pupils' self-efficacy and willingness to participate (Tremblay et al., 2018). Reflection tools such as the movement diary further strengthened responsibility and self-awareness—elements Rodriguez and Kim (2024) identify as critical for deep, lasting learning.

Taken together, the data affirm the value of physical-literacy initiatives that pair active practice with individual and group reflection, helping pupils develop physical, emotional, and social competencies in concert. Primary school thus emerges as a key venue for advancing children's overall well-being, provided that institutions support curricula that encourage youngsters to explore and enhance their movement capabilities in a purposeful, rewarding way.

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