

Redefining physical education to encompass a broader scope and utility, emphasising physical literacy as a key leverage.

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Published online: August 31, 2026

Accepted for publication: August 15, 2026

DOI:10.7752/jpes.2026.08144

Abstract:

Traditional Physical Education model: Physical education (PE) is commonly defined as an educational process that promotes holistic student development through structured physical activities. This student-centred approach employs physical activities and sports to enhance educational outcomes. **Present framework of PE:** While physical development in children can be objectively measured, assessing mental and social development through physical activities alone remains challenging. Mainstream PE may sustain interest in physical activity for a limited period, but it does not necessarily foster lifelong engagement in scientifically informed physical activity behaviours. Decades of traditional PE have not succeeded in cultivating essential physical activity behaviours globally, as evidenced even in leading sporting nations such as the United States and China. **Aligning the PE framework with the Education process:** Integrating PE into the broader educational process is necessary to restore its prestige and practical value. According to prominent philosophers, education should facilitate the transfer of knowledge and skills, enabling individuals to become self-determined and intrinsically motivated learners. Accordingly, PE should be structured to impart knowledge and skills related to physical activities and their scientific foundations, thereby addressing psychological and social dimensions and fostering intrinsic motivation for active and healthy lifestyles. **Physical literacy framework as the main lever for PE:** Physical literacy, encompassing the knowledge, skills, awareness, and motivation required for sustained engagement in physical activity, should serve as the foundation of the PE curriculum. Therefore, the definition of PE warrants reconsideration.

Keywords: Physical education, intrinsic motivation, self-determination, physical literacy, physical activities, active lifestyle.

Introduction, premise and Present Model of Child-centric Physical Education:

Physical Education has existed since ancient times and is recognised as vital for physical fitness and health. It appears in various forms across societies, always aiming to promote health and fitness. Modern scientific thinking, including present-day experts, has identified physical education as essential for preserving and promoting health and wholesome development among children. The concept of physical education was developed in the late nineteenth century, when several thinkers advocated making physical activities more scientific and integrating them into the education system (Rice E.A et al, 1969). This was especially aimed at schools to foster children's physical and psychological growth, encouraging an active lifestyle and better health. Boston and California in the United States were the first to introduce school physical activity programs. Supporters emphasised the importance of holistic child development through school programs. Many argued that scientifically designed physical activities could promote comprehensive development, leading to the introduction of physical education in schools. Play activities, in particular, serve as a powerful tool for emotional, social, and spiritual growth. Gradually, physical education became part of the main education system, contributing to overall development and complementing knowledge in other fields. The early twentieth century saw increased interest in physical education. It was introduced into schools and higher education to benefit students. As interest grew, experts began to address curriculum and teaching methods at all levels of education, from schools to universities. In the early twentieth century, education was predominantly influenced by child-centred approaches (Ha, T. T. T., et al. 2025). Physical education reflected these influences, notably the progressivism of John Dewey, the Montessori method, and existentialism. These philosophies emphasised the student, and since physical education primarily involved physical activities, the discipline was shaped accordingly. At that time, the scientific study of

physical education was nascent. Scholars sought to define physical education through the framework of child-centred philosophies. The curriculum was largely confined to physical and play activities for children, thereby serving primarily the school system rather than higher education. Consequently, play activities became central within educational institutions. This widespread adoption fostered broad support for child-centred methods internationally. As a result, physical educators conceptualised physical education in terms of child-centred rather than process-centred philosophies. Early definitions predominantly emphasised instruction in physical activities rather than cognitive development in the field.

This section examines key definitions of physical education proposed by prominent early figures in the field.

J. B. Nash: Physical education is that phase of the whole field of education that *deals with big muscle activities* and their related responses (Jable, J. T. 1985).

Cassidy: Physical Education is the sum of changes in the individual caused by *experiences centring on motor activity* (Cassidy, R. 1965).

Delbert Obersteuffer: Physical education is the sum of those experiences which come to the individual *through movement* (Hein F. V. 1973).

Sallis and McKenzie: A comprehensive but physically active approach that involves teaching social, cognitive, and physical skills, and achieving other goals through movement (Sallis, J. F., & McKenzie, T. L. 1991).

An analysis of key definitions from classical physical educationists indicates that physical education is primarily conceptualised as education through physical activities. Its objective is to promote holistic student development. These definitions adopt a student-centred approach, selecting physical activities as the instructional medium to achieve educational outcomes. However, such definitions constrain the scope of physical education by limiting it to physical and play activities aimed at achieving specific outcomes, such as the child's holistic development. Notably, these definitions omit consideration of teacher education in physical education, which warrants separate treatment. The curriculum and pedagogy of teacher education should not be included within the definition of physical education as presented by these authorities. This examination reveals two distinct issues related to curriculum and pedagogical aspects. According to these definitions, students receiving physical education are expected to develop across four human domains: physical, mental, social, and spiritual. This development is to be facilitated through selected physical activities designed to achieve these outcomes.

Outcomes and issues of present Child-centric Physical Education:

According to accepted definitions, the scope of physical education for students is limited to selected physical activities. This selection is made either by physical education teachers based on their knowledge and experience or by experts as part of the curriculum designed for each educational phase. Since physical education aims to educate students through physical activities, teachers require sufficient knowledge of various aspects of physical activities, including the science behind them and their role in fostering holistic development. Therefore, the teachers' curriculum scope cannot be equated with the definition of physical education, which encompasses extensive teacher education. Physical education teachers may acquire knowledge in areas such as motor fitness science, motor development in children, physical and health fitness, exercise science, including exercise physiology, sports psychology, sports sociology, and other related fields. This knowledge equips teachers with adequate physical literacy, which may foster intrinsic motivation and self-determined lifelong physical activity behaviours that support their holistic development and health (Öztürk, Ö., et al. 2023). In contrast, children in compulsory physical education programs typically experience only physical activities and play, without exposure to the knowledge components of physical exercise, science, and body management. However, in some nations, the theoretical part of physical activity science is taught to students at various levels as a compulsory physical education program, which may be considered an extension of physical education and is not within the scope defined by the term "physical education". In many countries, instruction in the theory of physical activity and body science is uncommon; instead, physical education focuses mostly on activities and sports (Hardman K. 2005).

Countries aim to use policies to foster lifelong habits of physical activity and an active lifestyle to promote public health. However, simply making physical education and sports participation compulsory may not be enough to create lasting physical activity behaviours and improved health. Most physical education legislation and curricula emphasise participation in activities over understanding the science of physical activity and the deeper aspects of fitness and health. Decades of compulsory physical education and sports programs worldwide have not significantly increased lifetime physical activity among populations. Although some studies suggest that sport can promote physical activity (Malm, C. et al. 2019), physical inactivity continues to rise. This issue persists even in highly successful sporting countries such as the United States of America and China (Strain et al. 2024). Therefore, it is essential to examine how the current practice of physical education ("***education through physical activities and not education on physical activities***") influences children's overall development, as described in global physical education philosophies and the issues related to the anticipated outcomes.

- A. *Physical Development*: This is one of the four major areas that physical education aims to target and help individuals develop. Physical development involves achieving sufficient physical growth and physical fitness for health. This includes enhancing children's motor fitness skills so they can participate in a range of physical activities and sports with ease and confidence. Physical education is designed to ensure these goals are met gradually if the curriculum is well-planned and implemented by skilled teachers. These teachers can effectively deliver physical education programs at all levels. When children attend regular physical education classes and have access to a variety of physical activities and equipment, they may be more motivated to participate consistently. Research shows that regular physical education activities encourage students to adopt active lifestyles beyond school hours (Polet, J. et al. 2019). However, it is unlikely that physical education classes alone can instil lifelong physical activity habits. If physical education throughout the education system had fostered such behaviours, the increase in global physical inactivity, now a major concern for organisations such as the World Health Organisation, would not exist. It may be normal for children to show interest and demonstrate high levels of physical and motor fitness during school activities. Yet, this does not guarantee lifelong physical activity habits, which are vital in today's world due to the rise of preventable non-communicable diseases. Although school physical education can support physical development, the fitness gained may not be maintained over time. This is mainly because continued activity depends mainly on self-determined intrinsic motivation, although many other factors also influence it (Xu, Z. et al. 2025). Although physical education classes promote physical development in children during their studies, students may not maintain these gains throughout their lives. Ensuring lifelong retention of physical development should be a primary focus of physical education curricula.
- B. *Psychological (mental and emotional) development*: Physical education aims to promote psychological development in children through selected physical activities that foster mental and emotional growth. According to classical definitions of physical education, the curriculum should ideally incorporate a range of physical activities, group sports, and games to facilitate expected improvements in cognitive abilities, including perceptual-motor skills. Children are expected to develop cognitive processing skills such as memory enhancement through experience, analysis, situational exploration, and application of reasoning to solve general problems. This process is achieved through well-formulated physical activities executed with effective pedagogical methods. Therefore, physical education teachers must understand how children can attain the anticipated cognitive development that supports problem-solving in daily life. However, it is difficult to confirm that participation in physical education during schooling sustains abstract thinking necessary for adult problem-solving in complex situations. Nonetheless, exposure to physical education can enhance children's cognitive abilities, including their general educational understanding. Research also shows that physical activity improves children's general intelligence, leading to better academic performance (Gil-Espinoza, F. J., et al. 2020). It is important to recognize that mental development is a lifelong process requiring continuous engagement to maintain evolving cognitive capacities. Thus, lifelong participation in group sports and physical activities is ideal to maximize the benefits of physical education. Physical education activities also enhance students' emotional strength, improving self-management and empathy, particularly through group sports that foster emotional intelligence (Fernandes, H. M., et al., 2024). Cognitive maturation and emotional intelligence are critical factors that significantly enhance students' mental capacities through well-designed group physical education activities and active sports (Mandolesi, L. et al 2018). However, the effectiveness of physical education depends heavily on the formulation of the curriculum, pedagogical frameworks, and teachers' understanding of these aspects. Consequently, the entire physical education system, including its framework and educators, bears primary responsibility for achieving students' mental and emotional development through physical education programs in educational institutions. A major challenge arises because the system often operates unilaterally, expecting student development across domains to occur automatically without engaging students in understanding physical education concepts. Students experience psychological changes through physical education activities, but are not taught how these changes occur or how to sustain them. This knowledge is essential for monitoring and maintaining advanced psychological development throughout life, enabling individuals to address complex daily and social challenges. Currently, the curricular aspects of physical education do not adequately address students' understanding of how to enhance their psychological frameworks. This gap requires urgent attention to improve the scope and utility of physical education for individuals and society. Students may lack an understanding of the scientific principles underlying physical activities and related domains, which limits their ability to engage in these activities with scientific awareness. Participation alone, even in well-structured physical activities, does not necessarily educate students about body mechanics or posture management for daily tasks. Psychological development should encompass not only general cognitive growth but also specific knowledge of exercise science, including the benefits and risks of exercise, as well as related factors such as nutrition, rest, and recovery. Without systematic, graded exposure to these concepts in early schooling, students may struggle to develop

adequate cognitive maturity regarding physical activity and the significance of an active lifestyle. Therefore, physical education should deliver comprehensive knowledge in these areas to support individuals' intrinsic motivation for an active lifestyle and enable them to self-monitor their activities using scientific principles.

- C. *Social Development*: Physical education aims to promote students' social development through physical activities, particularly group sports. The curriculum is typically designed to expose children to group sports and physical activities in a phased manner, based on their age, gradually consolidating their social skills to achieve optimal social development. In addition to social skills necessary for effective societal integration and balanced living, individuals may also improve their emotional regulation. Pro-social skills are essential for full societal integration and for mutually beneficial interactions that contribute to psychological well-being (Rodrigues da Silva, C. et al. 2026). Well-structured group physical activities and sports can enhance communication, cooperation, and understanding of complex group dynamics, enabling individuals to navigate life's challenges and resolve difficult situations through improved social skills (Xing, Y. et al. 2025). Participation in group sports also fosters empathy towards others and develops leadership abilities. Several studies in physical education indicate that properly designed and implemented group physical activities enhance social skills and promote social development in children (Benitez-Sillero, J. D., et al. 2022), which may help them manage complex life situations in adulthood. However, lifelong participation in group physical activities is more effective in optimising and maintaining social skills than early exposure alone. Therefore, individuals must be intrinsically motivated to engage in these activities consistently. Physical education activities are planned based on predetermined social outcomes and are implemented by physical education teachers. Consequently, these teachers play a crucial role in facilitating desired social development through their expertise. Although children may be attracted to sports and group physical activities, there is no guarantee of continued participation into adulthood to enhance social skills, as the curriculum primarily focuses on implementing physical activities rather than explicitly educating children about social development frameworks and their impact on future life events.
- D. *Spiritual Development*: Although classical definitions of physical education rarely address the spiritual dimension, it can be inferred that spiritual development forms part of a child's holistic growth during education. Physical education may offer children opportunities to engage in physical activities and sports that promote values such as kindness, cooperation, ethical conduct, and a positive attitude toward others (Russo, Gabriele & Paganelli, 2025). However, young children and adolescents are unlikely to achieve high levels of spiritual development solely through physical activities or game participation, as this aspect of human growth is complex and influenced by individual life experiences. Properly designed physical activities and group sports can yield positive effects that support children's holistic development. Nevertheless, the spiritual development attained through these means may be insufficient for sustaining a content and fulfilling life into adulthood, given that life experiences can significantly alter this domain. While classical definitions do not explicitly include spiritual development within physical education, it may emerge indirectly through mental, emotional, and social growth fostered by physical education activities. Moreover, sustaining spiritual development into adulthood is challenging, as it requires continuous reinforcement through life experiences that encourage constructive spiritual reflection and avoid negative influences (Wink, Paul, & Dillon, 2002). Therefore, physical education activities alone may struggle to leave a lasting impression on an individual's spiritual domain.

Possible setbacks in the present framework of physical education:

Physical education in contemporary contexts focuses not on imparting knowledge or awareness but on facilitating holistic development through structured physical activities. The current framework emphasises organising a range of physical and group sports activities to promote comprehensive student development. Students are expected to engage in a variety of physical activities to naturally achieve intended personality changes, often without understanding the underlying mechanisms of their development. Consequently, teachers are primarily responsible for the pedagogical knowledge and methodologies, while students lack direct engagement with the theoretical aspects of physical education. This represents a significant limitation, as students may not develop lasting awareness or the ability to select appropriate physical activities as they mature. The existing curriculum assumes that individuals will maintain holistic development gained through physical activities throughout their lives, a premise that appears unrealistic. Furthermore, the curriculum lacks sufficient knowledge transmission to understand the nuances of holistic development through physical education, which may lead to student scepticism, disinterest, and reduced motivation to participate actively. Apart from children's natural inclination to engage in sports, they often do not develop cognitive expertise in physical activities due to insufficient scientific knowledge and skills. Although scientifically designed physical and group sports activities can enhance holistic development and partially sustain mental, emotional, and social benefits into later life (Portela-Pino, I. et al. 2021), maintaining physical development achieved during early education requires a lifelong, scientifically informed active lifestyle. Therefore, physical education should extend beyond formal

schooling to support individuals in preserving health, fitness, and social-emotional skills into adulthood, especially given the increasing challenges of adult life. It is crucial to emphasise physical development within educational institutions to motivate students toward a physically active lifestyle and foster self-determined motivation for participation. Among all aspects of holistic development, physical development is the most transient, whereas mental, emotional, and social developments may persist longer. Without adherence to a scientifically based active lifestyle in adulthood, maintaining essential physical fitness for functional health is challenging. *The following points clarify and highlight issues within the current physical education curriculum framework.*

- *Students of physical education receive experiential learning through physical activities aimed at holistic development; however, they do not receive instruction on the scientific principles of physical activity, which is primarily conveyed to physical education teachers.*
- *The limited mental, emotional, and social development gained through physical education activities may assist individuals in daily life after completing formal education; however, it may be insufficient to address complex challenges encountered in adulthood.*
- *Although physical development can be achieved through physical education during formal schooling, it is unlikely to be maintained unless individuals engage in regular physical activity throughout life as a lifestyle habit to maximise fitness and health benefits.*

The necessity of aligning the framework of Physical Education with Education:

Various educational theories have proposed different definitions of the education process since the early introduction of formal education into modern society. Both child-centred and teacher-centred approaches emerged, with several eminent scholars offering distinct definitions of education. While these definitions were effective in their respective historical contexts, ongoing changes have been proposed to address the evolving requirements and outcomes of education. Education is a dynamic, lifelong process through which individuals seek to enhance multiple aspects of their lives to achieve greater satisfaction, health, and well-being. This process requires individuals to develop physically, mentally, socially, and spiritually. Successful education depends on factors such as intrinsic motivation, intelligence, socio-economic conditions, technology, and methodology. Although literacy is not always a direct outcome of education, it generally improves with the subject matter studied. Literacy may also result from informal education, including life experiences. Nevertheless, the education process should facilitate the transmission of knowledge and skills necessary to sustain and enhance literacy (Marshall, J. D. 2006). Physical education is an integral part of the general education process and must align with its frameworks and methodologies to gain societal acceptance and mutual benefit. Examining key definitions provided by modern educators can clarify the meaning and aims of education. It is important to note that the definitions discussed here pertain to formal education systems in which students engage with structured curricula. Given the diversity of educational forms influenced by socio-economic, cultural, and regional factors, it is challenging to apply all definitions uniformly across different educational contexts. The authors introduce two important definitions of education proposed by modern thinkers.

R.S. Peters: *“Worthwhile initiation of individuals into knowledge and understanding, fostering a cognitive perspective rather than mere training” (Kelvin Becket S. 2011).*

Lawrence Cremin: *“The deliberate, systematic, and sustained effort to transmit, evoke, or acquire knowledge, values, attitudes, skills, or sensibilities, including both intended and unintended outcomes” (Franklin V.P. 2003).*

The two definitions of education discussed above emphasise the importance of viewing education as a process oriented toward clear objectives. According to R. S. Peters education should transform learners by enabling them to apply critical thinking and reasoning for personal benefit through the acquisition of knowledge and skills (Ozoliņš, J. T., 2013). According to Peters, mere proficiency in intended skills should not be the sole outcome of education. Lawrence Cremin suggested that education may originate from teachers or students but must occur systematically to facilitate the transmission of knowledge, skills, and values, ultimately establishing attitudes that provide long-term advantages for managing lifelong challenges (Pedraza, C.A.A. 2022). This definition applies to both formal and informal education. Collectively, these definitions indicate that education should result in the transmission of knowledge, skills, and, particularly, attitudes related to subject matter, thereby enhancing literacy and enabling better management of life situations beyond formal education into adulthood. While the educational process primarily aims to enhance learners' knowledge and skills, its frameworks and methodologies should be grounded in learning theories to incorporate effective pedagogical practices for improved student comprehension (Rosmawijah Jawawi, et al. 2024). Although this article focuses on the education process and its outcomes, the integration of learning theories into physical education falls outside its scope. The authors emphasize the need to adapt to evolving trends and perspectives in modern education to increase the utility and acceptance of physical education across societies and nations, given its current status. Therefore, physical education must adopt modern educational approaches and implement necessary adaptations to impart knowledge and skills that enable children to develop proactive lifestyles based on critical thinking and reasoning acquired through physical education during their formal studies. Physical

education should provide comprehensive knowledge enabling students to understand how to optimize and maintain their cognitive, physical, and social domains through scientific physical activities, thereby supporting holistic development observed during formal education and sustained into adulthood for daily life challenges. Theoretical components of physical, psychological, and social development through physical activities and sports should be incorporated into physical education curricula to align with modern education definitions, necessitating adjustments in implementation frameworks. Redefining physical education in line with modern educational definitions is essential to make it more inclusive, broader in scope, and more visible and respected across societies and nations, especially emphasising that Physical Literacy is the key leverage of the Physical Education curriculum.

Understanding the framework of the concept of Physical Literacy:

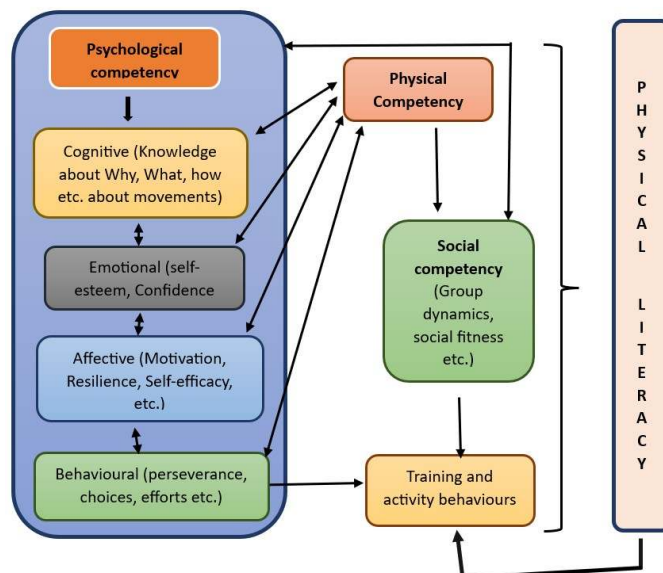
Recently, the concept of physical literacy has received considerable attention due to its potential influence on individuals' physical activity behaviours (Öztürk, Ö., et al. 2023). Physical literacy refers to an individual's knowledge of exercise-related factors and the determinants that encourage regular participation in physical activity. Proponents argue that physical literacy fosters consistent engagement in exercise, which may contribute to improved functional health, encompassing physical, emotional, and social well-being. Therefore, increased physical literacy may lead to the adoption of positive exercise behaviours as a lifelong practice (Naylor, A. et al 2025), which is crucial for addressing non-communicable diseases. To effectively understand the framework of physical literacy, it is necessary to examine several key definitions.

The International Physical Literacy Association: Physical literacy is the motivation, confidence, physical competence, knowledge, and understanding to value and take responsibility for engagement in physical activities for life (IPLA n.d).

Dr Margaret Whitehead: Physical Literacy is the disposition acquired by human individuals encompassing the motivation, confidence, physical competence, knowledge and understanding that establishes purposeful physical pursuits as an integral part of their lifestyle (Whitehead, M. 2001).

A review of these definitions reveals that these definitions are comprehensive and effective in promoting lifelong physical activity behaviours. They emphasise the development of self-determined, intrinsic motivation by ensuring individuals possess a thorough understanding of the benefits and drawbacks of both exercising and not exercising, as well as alternative strategies for maintaining regular physical activity even in challenging circumstances (Rosenkranz, R. R., et al. 2023). These definitions underscore that physical literacy should equip individuals with knowledge about various forms of exercise, the use of different types of equipment, and effective body posture management in daily life. Additionally, they highlight the importance of social dynamics, enabling individuals to derive mutual benefits from group physical activities, which are often more engaging and motivating (Samendinger, S., et al. 2019). The physical literacy framework comprises three major interconnected domains that collectively foster intrinsic motivation and willingness to engage in regular physical activity. Figure 2 illustrates the interrelationship among these three core aspects of physical literacy and demonstrates how physical literacy can influence physical activity behaviours. Physical literacy should foster the development of physical, psychological, and social competencies in individuals, thereby enhancing motivation, willingness, and evidence-based participation in physical activities, including effective management of body posture in daily life. The physical literacy curriculum

Figure 1: Framework of Physical Literacy



should comprehensively address these three domains. A well-structured curriculum and effective teaching methods are essential for promoting physical literacy within mainstream education, particularly within the broad area of Physical Education. Introducing these concepts in phases from early childhood and integrating compulsory physical activities and sports programmes can ensure individuals achieve sufficient levels of physical literacy. This approach increases opportunities for sustained motivation and participation in scientifically designed physical activities throughout life, even under less favourable conditions, by encouraging adaptable alternative forms of exercise. According to several proponents of the concept of physical literacy, its three core aspects are as follows:

A. Physical Competence: Students should be provided with comprehensive opportunities to engage in a wide range of physical activities and sports, including the use of various sports and games equipment. This objective can be achieved through well-designed physical education programs that optimise and develop motor abilities by systematically enhancing students' motor educability from early childhood through higher education. Exposure to scientifically planned physical education activities is essential for gradually strengthening motor educability and developing general motor skills, enabling participation in both simple and complex physical and sports activities with ease (Shakty, A. M. O., et al. 2022). Accordingly, educational programs must be carefully structured to optimise general physical fitness, ensuring that participation in physical activities is both accessible and compulsory. The physical education curriculum should be developed and implemented to foster sufficient self-efficacy in students regarding their general physical and motor abilities, including physical fitness, thereby encouraging continued participation in various physical activities with confidence and interest (Galán-Arroyo C, et al. 2024). Regarding the physical competence aspect of physical literacy, the current physical education system, with its existing curriculum and pedagogy, may adequately address these needs. However, it is important to recognise that mere participation in physical activities and sports during formal education does not necessarily ensure lifelong motivation for an active lifestyle. Intrinsic motivation for lifelong participation in physical activities is essential for sustained health benefits (Almagro, B. J., et al. 2020). In this context, the psychological competence component of physical literacy offers a logical framework for understanding and promoting lifelong physical activity behaviours for health.

B. Psychological competence: The psychological competence component of physical literacy encompasses cognitive, emotional, affective, and behavioural domains. This competence provides individuals with knowledge of physical exercises and body posture, while fostering self-confidence and self-esteem. These attributes promote self- and internal motivation (Lochbaum, M., et al. 2022), enabling individuals to maintain a scientifically informed, regular, physically active lifestyle, even under challenging conditions, by seeking optimal forms of physical exercise. Well-designed curricula and effectively implemented physical literacy programmes in mainstream education can deliver comprehensive knowledge on various exercise-related topics. These include basic human anatomy and physiology, the effects of exercise on the body, the impact of proper nutrition on exercise, and other relevant issues, including the concept of beauty and appreciation of body aesthetics. Introducing these topics progressively from early education through college enables individuals to acquire the knowledge necessary to independently plan and participate in targeted, science-based physical activities, allowing for convenience and choice based on available resources. In addition to theoretical education, compulsory physical education and sports activities introduced from early childhood can enhance self-efficacy related to physical activity and a broad range of sports, encouraging participation with confidence and interest. Consequently, physical activity behaviour may result from an individual's knowledge of exercise science (Fredriksson, S. V., et al. 2018), physical competence in various motor activities (Burton, A. M., et al. 2023), and social skills for managing group dynamics to achieve mutual benefits. The goal is not merely to teach the importance of intrinsic, self-driven motivation for physical activity, but to foster these qualities through engagement in physical activity and education in exercise science. Individuals who possess a certain level of knowledge in exercise science and related fields, along with adequate physical and motor skills, are more likely to develop intrinsic motivation for regular physical activity (Teixeira, P. J., et al. 2012).

C. Social Competence: Regarding the social competence component of physical literacy, current mainstream physical education programs demonstrate significant effectiveness. Participation in physical education and sports activities within mainstream education systems naturally fosters social development. Children who engage in structured group sports are likely to improve their social dynamics skills, which can facilitate a deeper understanding of group dynamics and social interaction as they mature (Wang, P., et al. 2025). Continuous involvement in group sports from early schooling through higher education further enhances social competence, equipping individuals with the skills to navigate social situations and promoting mutually beneficial physical activity. Enhanced social competence can increase motivation for physical activity through group influence and, when combined with physical and psychological competence and relevant knowledge, supports sustained and regular participation in physical activities.

Physical Literacy should be the key lever in the Physical Education curriculum from early childhood through higher education.

A comparative analysis of physical education and physical literacy reveals that mainstream physical education primarily aims to promote holistic child development through physical activities and sports. In contrast, physical literacy is the outcome of an educational process that enables individuals to independently optimise and maintain their overall development, fitness, and health through self-directed exercise routines and participation in sports, driven by acquired knowledge and motivation. Physical education seeks to foster holistic development through instruction in physical activities and sports. However, assessing holistic development in children is inherently abstract and may be influenced by factors such as economic status, environmental conditions, social context, and nutritional status. While health education and general nutrition topics included in the physical education curriculum may encourage students to adopt healthier lifestyles, this outcome depends on the effectiveness of instructional methods. Mainstream physical education programs primarily address students' physical, psychological, and social development through activities and sports, but the curriculum does not explicitly aim to enhance students' knowledge in these domains. Typically, only physical education teachers are expected to possess a comprehensive understanding of health, posture management, nutrition, and school health programs and to apply this expertise in delivering physical education activities. Consequently, students in mainstream physical education often engage in physical activities without a deep understanding of the underlying science, even though they may acquire some concepts in health education.

Physical literacy, on the other hand, encompasses knowledge of exercise science, basic anatomy and physiology, the effects of exercise on health, nutrition for physically active individuals, body aesthetics, and the importance of posture. It also includes related concepts, the capacity to perform various physical activities, and sufficient motivation and willingness to engage regularly. Physical literacy should result from a systematic educational process involving a structured curriculum and phased instructional methods from early childhood through higher education. Additionally, it may develop through continuous self-directed learning and personal engagement with these topics. Ultimately, physical literacy enables individuals to adopt and maintain a physically active lifestyle, thereby contributing to improved health and vitality. Individuals with higher levels of physical literacy are more likely to sustain physically active lifestyles due to their comprehensive knowledge and competencies, including both physical and social skills (Naylor, A., et al, 2025). Strong intrinsic motivation further increases the likelihood of lifelong participation in physical activity. In contrast, physical competence and related aspects derived solely from physical education may not persist if individuals lack ongoing motivation, as mere participation in activities does not guarantee sustained engagement. Given the global increase in physical inactivity projected by the World Health Organisation, it is essential to ensure that individuals are sufficiently motivated and equipped with appropriate knowledge of exercise to participate in physical activity, even under challenging circumstances. The current model of physical education in mainstream education has not provided adequate impetus or motivation for individuals to adopt healthier physical activity habits. Rather than redefining physical education solely due to insufficient interest, it should be redefined to address the contemporary need for enhanced physical literacy. Notably, physical education teachers often demonstrate higher physical literacy due to specialised curricula and instructional methods. It is important that students in general education also receive curricula similar to those in physical education teacher training to foster physical literacy, thereby improving the fitness and functional health of societies and nations. While it may not be feasible for every student to achieve the full physical literacy outlined in the framework, it is crucial to develop optimal levels of physical literacy across its three domains among mainstream students through appropriate curriculum modifications. Consequently, the definition of physical education should be revised to reflect greater inclusiveness.

Discussion:

Traditional physical education primarily aims to promote holistic student development through physical activities and sports, but often lacks emphasis on imparting knowledge of exercise science and related topics. While structured curricula and teaching methods can facilitate desirable physical, mental, and social development, the most observable outcome is typically physical development. Other domains, such as mental, emotional, and social growth, largely depend on students' choices of activities and their interpretations of experiences during sports and physical activities.

Although group sports may foster emotional and social development, individual differences in intelligence and intrinsic motivation can lead to varying levels of growth (Han B, 2026). Furthermore, students may struggle to appreciate the significance of emotional and social development for overall life quality unless these aspects are explicitly addressed. This lack of awareness regarding the benefits of mental, emotional, and social development represents a significant limitation of traditional physical education. Additionally, physical development achieved through school-based physical education may not generate sufficient intrinsic motivation for lifelong engagement in physical activity, which is necessary to optimise fitness and health. While regular participation in physical activities during school may sustain interest for a period, there is no assurance that this interest will persist throughout life.

Conclusion:

The integration of a wellness lifestyle—including physical activity, mental and emotional well-being, and social health—into mainstream education is essential. To achieve this, making physical education a compulsory and examinable subject from primary through university levels is proposed. Physical literacy is proposed as the core concept and main leverage for physical education, integrating practical activities with theoretical knowledge in exercise science, posture, aesthetics, nutrition, and group dynamics. This approach aims to address current societal health needs. Rather than focusing solely on holistic student development through traditional physical activities, physical education should emphasise the development of physically literate individuals through a targeted curriculum. *In conclusion, physical education must be recognised as an educational process on physical activities instead of as an educational process through physical activities.*

Impact statement:

Reframing the definition of physical education to encompass physical literacy would enhance its utility and elevate its status. The current student-centred physical education curriculum emphasises holistic development through physical activities, but does not adequately address the importance of fostering scientific attitudes and knowledge essential for lifelong engagement in scientifically informed physical activities.

Data availability statement: As the study is of a scientific review in nature, there is no data for this article.

Conflict of interest: The authors have no conflicts of interest.

Funding: There is no funding received for this work from any source.

Declaration about AI usage: No AI tool has been used in the writing of this article.

English Certificate: We have used the Grammarly App for English correction.

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