

REVIEW

Holistic Education in Physical Education: A Systematic Review of Conceptualisations, Practices, Outcomes, and Challenges

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Abstract

Physical education (PE) can contribute to whole-person development, yet its potential is often constrained by mind–body dualism, narrow performance priorities, and limited teacher preparation. This systematic review examined how holistic PE has been conceptualised, enacted, evaluated, and challenged in research published from 2015 to 2025. Following PRISMA guidance, six databases were searched for peer-reviewed studies. After title, abstract, and full-text screening, 35 studies addressing holistic PE in formal educational settings were included. An inductive, domain-based thematic synthesis combined open coding with thematic clustering across four predefined domains: conceptualisations, practices, outcomes, and challenges. The analysis generated 152 codes, 189 subthemes, and 15 meta-themes. Across the literature, holistic PE was commonly framed through physical and health literacy, embodiment, whole-person health, and the development of personal and social resources. Reported practices included embodied, reflective, culturally responsive, and interdisciplinary approaches. Outcomes extended beyond physical competence to cognitive development, social and emotional learning, values, agency, and health literacy. Persistent barriers included standardised assessment, mind–body dualism, weak cultural integration, and insufficient teacher preparation. Based on these findings, the review proposes the Holistic Physical Education Ripple Framework (HPERF), informed by the Tai Chi symbol and systems thinking. HPERF represents holistic PE as an evolving ecosystem in which concepts, practices, outcomes, and challenges interact dynamically. It provides a flexible structure for curriculum design, reflective teaching, evidence mapping, and future longitudinal research.

Keywords:

wellbeing, holism, health education, lifelong learning, interdisciplinary education, quality education

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Introduction

The World Health Organization's (WHO, 2024a) slogan "Health for All and All for Health", adopted at the Ninth Global Conference on Health Promotion, emphasises the interdependence of health promotion and sustainable development. Education is central to this agenda because contemporary health challenges extend beyond disease prevention to include physical inactivity, mental ill health, and social inequity (WHO, 2025). The United Nations Sustainable Development Goals (SDGs), particularly Goal 3, Good Health and Well-being, and Goal 4,

Quality Education, similarly position education as a means of promoting population health and human development (United Nations, 2015). Consistent with SDG 4, the United Nations Educational, Scientific and Cultural Organization's International Bureau of Education (UNESCO-IBE) promotes a holistic and systemic view of curriculum development and learning (UNESCO, 2023).

In this review, holistic education refers to an approach that develops learners' physical, psychological, social, cognitive, ethical, and, where relevant, spiritual capacities in an integrated manner. This orientation aligns with physical literacy and with global initiatives that view health as multidimensional rather than solely biomedical (WHO, 2023). Holistic education challenges narrow, subject-centred models by combining interdisciplinary learning, lived experience, social interaction, and reflection to support critical thinking, empathy, responsibility, and lifelong learning (Mahmoudi et al., 2012). Although holistic ideas have longstanding philosophical roots, holistic education emerged as a distinct educational movement during the late twentieth century. Miller's (1991) work helped articulate the field, while J. P. Miller (2019) developed a curriculum framework organised around relationships among modes of thinking, mind and body, domains of knowledge, individuals and communities, humanity and the Earth, and the inner life. Miller described this relational focus as follows:

The focus of holistic education is on relationship: the relationship between linear thinking and intuition, the relationship between mind and body, the relationships among various domains of knowledge, the relationship between the individual and community, the relationship to the earth, and the relationship to our souls. In the holistic curriculum the student examines this relationship so that he or she gains both awareness of them and the skills necessary to transform the relationship where appropriate. (Miller, 2019, p. 89)

Miller's relational account provides the philosophical foundation for this review. It is especially relevant to physical education (PE) because movement places bodily experience, cognition, emotion, social interaction, and engagement with the environment within the same learning context. PE can connect mind and body through purposeful movement, translate social responsibility into cooperation and shared decision-making, and develop ecological awareness through activity in natural environments. Viewed in this way, holistic PE is not simply an expanded list of learning outcomes; it is an effort to reconnect dimensions of experience that conventional curricula often separate. The comparatively limited attention given to spiritual or existential dimensions in contemporary PE scholarship also indicates an area for further conceptual development.

Holistic education encompasses diverse philosophical orientations and pedagogical practices, but they share an emphasis on wholeness and on avoiding the exclusion of significant dimensions of human experience (Mahmoudi et al., 2012). PE is particularly well placed to integrate these dimensions because it can foster physical competence, emotional regulation, social learning, cognitive engagement, and a sense of purpose through movement (Bailey et al., 2009; Hellison et al., 2025). In practical terms, holistic PE intentionally develops the learner as a whole person rather than treating physical fitness and motor skill as isolated ends. Evidence linking physical activity with mental health, cognitive function, self-esteem, and social connection further supports this broader orientation (Bailey, 2017; Ennis, 2017; Haerens et al., 2011; WHO, 2024b). A holistic approach therefore extends traditional PE by integrating physical, cognitive, social, emotional, and ethical learning (Lynch & Soukup, 2016). Such an approach can contribute to health and well-being across the life course and is consistent with preventive and inclusive public-health priorities (WHO, 2022).

Holistic conceptions of education and PE also have historical precedents. Classical Greek ideals connected bodily cultivation with moral and intellectual development, a relationship later captured in the Latin maxim *mens sana in corpore sano*, "a sound mind in a sound body"

(Demirel & Yıldırım, 2013; Gültekin et al., 2013; Young, 2005). Contemporary traditions extend these ideas in different cultural forms. For example, Japanese taiiku links physical education with lifelong moral and physical well-being (Hayashi, 2025), while Chinese and Daoist perspectives emphasise balance, embodied knowledge, and harmony with the natural world (Xu & He, 2025; Yu & Ilundáin-Agurruza, 2016). International policy has likewise framed physical education and sport as contributors to whole-person development and social participation (Habyarimana et al., 2022; UNESCO, 2015). Curricula in countries including Canada, the United States, and New Zealand increasingly incorporate physical literacy, well-being, inclusion, and interdisciplinary learning (Lynch, 2024). Realising holistic education through PE, however, requires more than adding innovative activities. It depends on culturally responsive curriculum design, supportive policy, appropriate assessment, and sustained teacher development (Long & Bianchini, 2018).

Against this background, the review examines how PE can move beyond disciplinary and mind–body divisions to support human flourishing in contemporary education. It synthesises literature published between 2015 and 2025 on conceptual frameworks, pedagogical practices, multidimensional outcomes, and implementation challenges, and uses the findings to develop an adaptable framework for holistic PE (Kirk, 2013; Tannehill & Lund, 2015). The review had five objectives: (1) to identify and synthesise the principal conceptualisations of holistic education in PE scholarship; (2) to categorise pedagogical approaches and curriculum designs that translate holistic principles into practice; (3) to examine reported physical, cognitive, affective, social, ethical, and behavioural outcomes; (4) to analyse structural, professional, and sociocultural barriers to implementation; and (5) to construct a flexible conceptual framework that can be refined through future research and practice.

Methods and Materials

Search Strategy

Six electronic databases were searched: Education Research Complete, ERIC, SPORTDiscus, Scopus, Web of Science, and Google Scholar. The search combined terms relating to holistic education and PE using the Boolean operators AND and OR. The core search string was (“holistic” OR “whole” OR “integrated education”) AND (“physical education” OR “PE” OR “sport education” OR “movement education” OR “school sport*” OR “sport*”). Search syntax was adapted to the requirements of each database. Apart from the publication period, language, and document-type criteria described below, no additional concept filters were applied at the search stage. This deliberately broad strategy increased the screening burden but reduced the likelihood of excluding studies that used related terminology rather than explicitly naming “holistic education” (Table 1).

Table 1. Key Concepts and Search Terms

Key Concepts	Search Terms
Holistic Education	"holistic", "whole", "integrated education",
Physical Education	physical education", "PE", "sport education", "movement education", "school sport*".

Inclusion and Exclusion Criteria

Peer-reviewed journal articles published in English between 2015 and 2025 were eligible. Screening proceeded in three stages: title screening, abstract screening, and full-text review (Figure 1). Empirical studies using quantitative, qualitative, or mixed methods were included, as were conceptual papers that directly examined holistic education in PE. To be eligible, a study had to focus on PE, health and physical education (HPE), sport education, or movement education in a formal educational setting and address whole-person development through at least two interrelated dimensions, such as physical and social-emotional development, cognition and embodiment, or health and ecological awareness. Studies were also eligible when they critically examined the meaning of the “whole person”, interdisciplinary integration, or the relationship among physical, mental, social, moral, and cultural dimensions in PE.

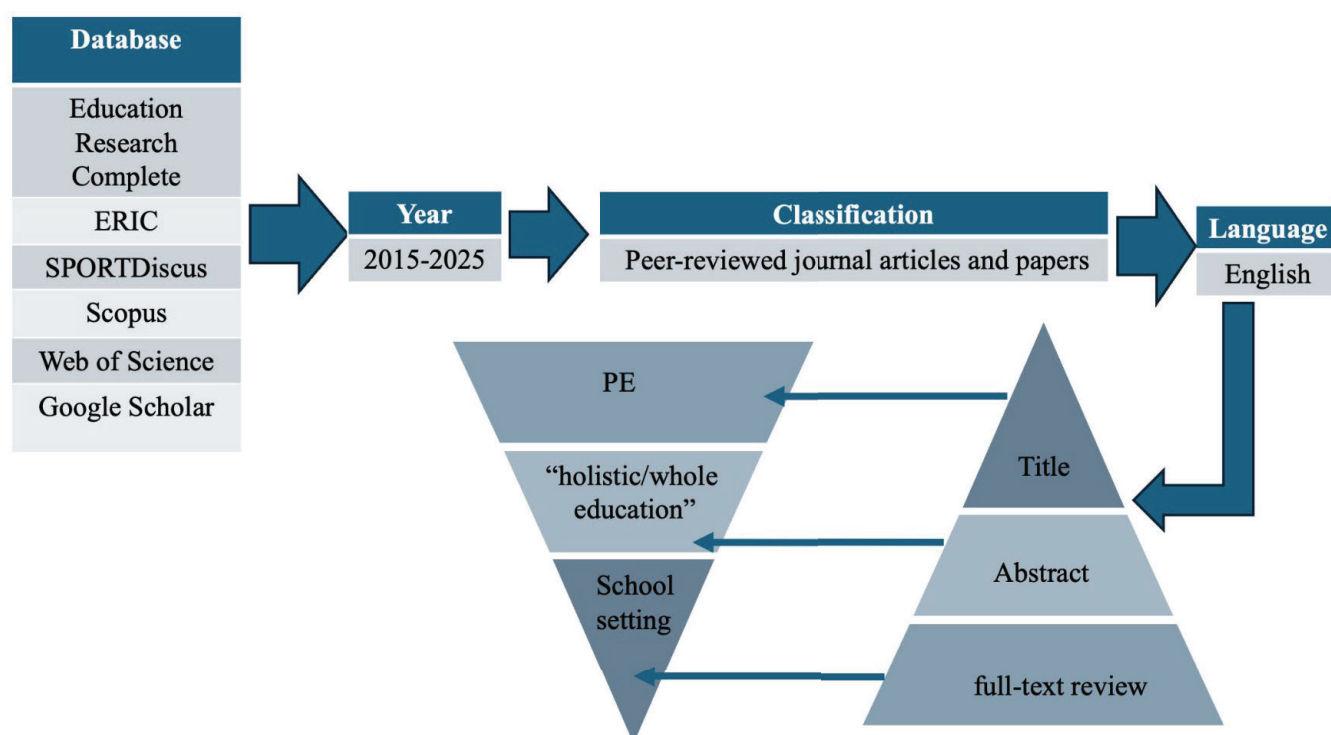


Figure 1. Screening Process for Articles Selection

Studies were excluded if they were published outside the specified period, were not available in English, or were not peer-reviewed journal articles. Conference papers, reviews, meta-analyses, books, book chapters, editorials, opinion pieces, grey literature, and records for which the full text could not be obtained were excluded. Duplicate reports were removed, and when multiple publications used the same data, the most comprehensive or relevant report was retained. Studies conducted solely in community sport, professional sport, clinical exercise, or other non-educational settings were excluded. The review also excluded studies limited to technical skill instruction or competitive performance without an explicit whole-person component, as well as exercise physiology, biomechanics, and medical studies that did not address educational theory, pedagogy, or curriculum. The selection process was documented using the PRISMA 2020 framework to enhance transparency and reproducibility (Page et al., 2021; Figure 2).

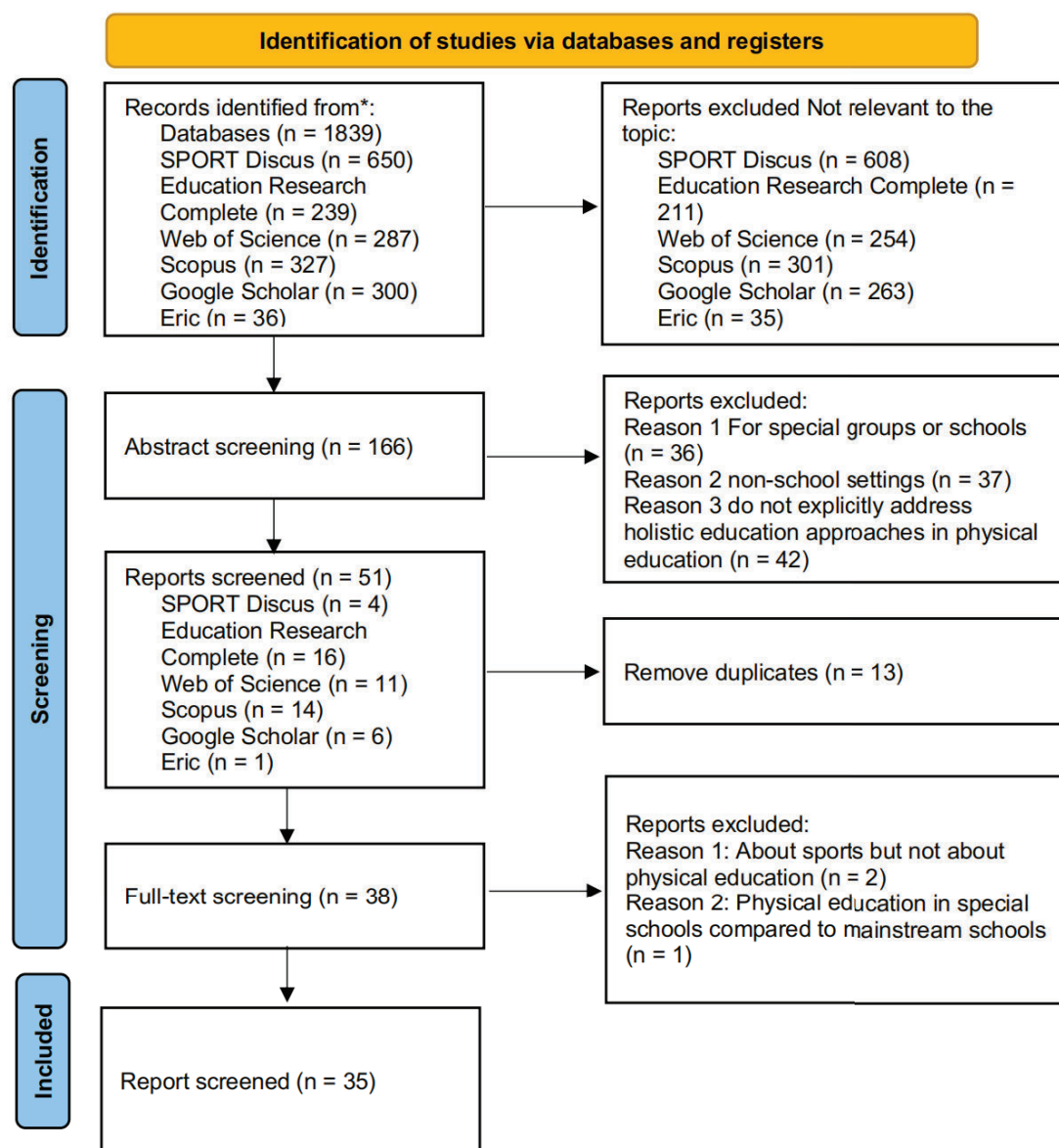


Figure 2. PRISMA flowchart of in/exclusions through the stages of the review

Data Extraction and Analysis

Data were extracted from each included study using a structured framework that recorded publication details, country and educational context, participants, study design, conceptual framing, pedagogical practices, reported outcomes, and implementation challenges. These characteristics were summarised in Table 2. The extraction framework was designed to capture both empirical evidence and conceptual contributions, recognising that some papers did not involve participants directly.

The review used an inductive, domain-based thematic synthesis informed by Thomas and Harden (2008) and conventional content analysis (Hsieh & Shannon, 2005). Findings were initially organised under four predefined domains, conceptualisations, practices, outcomes, and challenges, after which open coding was used to identify patterns within each domain. The analysis involved repeated reading, line-by-line coding of relevant findings and arguments, development of descriptive subthemes, and iterative clustering into higher-order meta-themes. Braun and Clarke's (2019, 2022) guidance on reflexive thematic analysis informed the processes of familiarisation, interpretation, and theme refinement. Key statements and conclusions were extracted from each article and coded as closely as possible to the source meaning. Codes were then compared across studies, grouped into subthemes, and synthesised into meta-themes. Table 3 presents a condensed coding framework. For clarity, each article appears once in the table with a representative coding entry, although individual articles could contribute to more than one domain or theme. Tables 4 to 7 present the subthemes within each of the four domains.

Because the analysis was conducted by one researcher, inter-coder reliability was not calculated. To strengthen rigour, the coding framework was reviewed repeatedly and discussed through external peer feedback. Interpretations were checked against the source studies throughout the process, and claims were kept within the limits of the reported evidence. The four domains were treated as interconnected rather than sequential: conceptualisations shape pedagogical practices, practices generate outcomes, and outcomes and implementation challenges inform subsequent conceptual and pedagogical refinement (Figure 4). The review protocol was registered with the International Prospective Register of Systematic Reviews (PROSPERO; CRD42024516532).

Table 2. Characteristics of the Reviewed Studies

Source	Geographical Distribution	Research Subjects	Methodological Orientations
Shelley & McCuaig, 2019	Australia (Queensland)	Pre-service teachers, six students from 19 to 27 years old	Qualitative case study
Wibowo et al., 2023	Germany	5th-grade physical education class	Conceptual and descriptive
Gleddie & Morgan, 2020	Canada	School-aged students and teachers Mix of theoretical, empirical, and policy-oriented sources	Theoretical and narrative review
Xu & He, 2025	China (Beijing)	University students and faculty members	A qualitative inquiry centred on an intervention-based case study
Polsgrove & Lockyer, 2018	US	Proposal of a new theoretical model-The Holistic Approach to Developmental Movement Education (HADME)	A conceptual paper
Coulter et al., 2015	Australia	A hypothetical case study of a male elite athlete	Theoretical and narrative review
Kennedy et al., 2019	Ireland	Junior high school students	A qualitative, ethnographic research design
Papaioannou, 2017	Greece	Ancient Greek philosophy, modern positive psychology, and motivational theories, Students, Children, Overweight students, Athletes	Theoretical, philosophical, and position paper
Yu & Ilundáin-Agurruza, 2016	Taiwan, China	The Chinese martial art of “Taijiquan” and its principle of ‘inside-outside’ connectivity, Philosophical concept of the 'Body without Organs'	A qualitative, comparative, and interpretive rooted in the humanities
Thorburn, 2020	UK, Australia, Ireland	School-aged children and adolescents aged 5-16, Students aged 16-18 who are undertaking examination awards in physical education, Teachers and policy stakeholders	Philosophical and conceptual analysis
Hayashi, 2025	Japan	Japanese scholarly work on ‘Taiiku’, Official Japanese documents from the Ministry of Education, Culture, Sports, Science and Technology, the Japan Sports Agency, and the Science Council of Japan, Western philosophical works on well-being, moral perfectionism, and spiritual exercise	Conceptual and philosophical analysis
Haga et al., 2024	Norway	10th grade students	Primary qualitative research study
Fernández-Bustos et al., 2024	Spain (Albacete)	Schoolchildren	Quasi-experimental design
Liu et al., 2024	Malaysia	Student-athletes, elite athletes, children, coaches, and administrators	Mixed-methods approach

Baena-Morales et al., 2024	Spain	School-aged children and adolescents	Theoretical proposition for a new intervention model
Cardina & James, 2018	US	American national frameworks, standards, and guidance documents	Theoretical and descriptive
Dalziel et al., 2019	UK (Scotland)	Primary 6 aged between 10 and 11 years	Pre-post quasi-experimental design
Linker & Deutsch, 2020	US	University students	A programme implementation case study
Sprake & Walker, 2015	UK (England)	Pupils/school children, pe teachers, adults	A conceptual paper
Weight et al., 2016	US	Undergraduate students	A cross-sectional study
Etkin, 2024	Canada (Manitoba)	Policy documents from Statistics Canada	Narrative review
Jenny & Rhodes, 2017	US (South Carolina)	Second-grade class students	Professional and conceptual review
Papaioannou et al., 2019	Greece	First year of secondary school	Professional and conceptual review
Brunsdon & Walker, 2021	US	British and American education practice cases	A conceptual paper
Nopembri & Sugiyama, 2022	Indonesia (Yogyakarta)	10 to 12 years old elementary school students	Quantitative research
Kreider, 2018	US	1 physical education teacher, 10 current students, and 3 graduates	Qualitative case study design
Green et al., 2018	Canada	Educational systems, assessment tools, and policy frameworks of Canada, Wales, the United Kingdom, the United States, and Australia	Narrative review and conceptual analysis
Purnomo et al., 2024	Indonesia (Padang, West Sumatra)	High school students	Associative research and quantitative descriptive research
Schenker, 2017	Sweden (Malmö)	Two prime movers and leaders of the KIOSK programme, middle-level classes (ages 10–12)	A qualitative case study
Ruin & Stibbe, 2021	Germany	Documentary artefacts, curriculum documents from the selected German states	Hermeneutically oriented qualitative text analysis
Neto & Joao, 2022	Brazil	philosophical paradigms (e.g., Cartesianism, complexity thinking) theoretical proposals (e.g., Science of Human Motricity, Transdisciplinarity)	Theoretical and conceptual paper
Baena-Morales & González-Víllora, 2022	US	High school students	Qualitative case-study design
Pang, 2020	Hong Kong Special Administrative Region	Based on a sociological and discursive analysis of the HPE field in Hong Kong, using Pierre Bourdieu's concepts of habitus, field, and capital as its primary theoretical framework	A theoretical and conceptual paper

Thorburn & Stolz, 2015	UK, Australia	Philosophical (Merleau-Ponty, MacIntyre, Dewey), theoretical (physical education and phenomenology), and curriculum-based sources (Australian Curriculum)	Conceptual and theoretical paper
Escalié et al., 2017	French	One Physical Education teacher and thirty-two high school students	A qualitative longitudinal case study

Table 3. The process of extracting codes and themes from the four aspects of holistic PE:
Source, Country, Codes, themes, Meta-themes

Source	Country	Example Codes	Themes	Meta-themes
Shelley & McCuaig, 2019	Australia	Sociocultural perspective seeks to highlight how health is multi-dimensional in nature.	multi-dimensional health	1-Meta-theme 1 Health and physical Literacy (38)
Wibowo et al., 2023	Germany	Bildung is a holistic development of cognitive, physical, emotional, social, and aesthetic capacities.	cognitive, physical, emotional, social, aesthetic capacities	
Gleddie & Morgan, 2020	Canada	Critical attributes from physical literacy theory are seamlessly integrated and nurtured in all four domains: physical, cognitive, behavioural, and affective.	physical, cognitive, behavioural, affective	
Xu & He, 2025	China	A holistic approach to embodiment education that values the unity of body and mind.	unity of body and mind	1-Meta-theme 2 Embodiment (14)
Polsgrove & Lockyer, 2018	US	Considering the human body as a dynamic system.	dynamic system	1-Meta-theme 3 Holistic HPE (16)
Coulter et al., 2015	Australia	People can be defined through three layers of understanding, incorporating (a) dispositional traits, (b) characteristic adaptations, and (c) narrative identities. Together these layers provide a vision of the whole person.	dispositional traits, characteristic adaptations, narrative identities	
Kennedy et al., 2019	UK	This paper lays bare the central role the managed body plays in the 'production of cultural and economic capital'	cultural/economic capital production	1-Meta-theme 4 Capital (3)
Papaioannou, 2017	Greece	If it is mixed with some exercise and rivalry which ends in pleasure, it promotes health in the body and intelligence in the mind.	promotes health in body promotes intelligence	2-Meta-theme 1 Physical Literacy learning (2)
Yu & Ilundáin-Agurreza, 2016	Taiwan, China	The concept of inside-outside connectivity is Chinese philosophical traditions.	inside-outside connectivity	2-Meta-theme 2 Embodied Learning (25)
Thorburn, 2020	UK	Embodied subjectivity is capable of providing the foundational cornerstone for sustaining child and adolescent engagement in physical education	embodied subjectivity	
Hayashi, 2025	Japan	The philosophies of moral perfectionism and spiritual exercise aligning with the core principles of Taiiku.	perfectionism spiritual exercise	2-Meta-theme 3 Interdisciplinary teaching (Education framework / theory) (20)
Haga et al., 2024	Norway	Students can adopt a holistic and comprehensive understanding of health, provided they have the time and opportunities for experience, and reflect on the connection between movement, exercise, health, and the body.	reflection capacity	
Fernández-Bustos et al., 2024	Spain	The Health-based Physical Education framework (HbPE) is one of the most interesting frameworks for health development	Health-based Physical Education framework (HbPE)	
Liu et al., 2024	Malaysia	The Integrated Holistic Development Programme for College Athletes (IHDP-CA) on the holistic development outcomes of student-athletes	IHDP-CA	
Baena-Morales et al., 2024	Spain	The Intervention Framework for Sustainable Development in Physical Education (PESDIM), which combines psychological theories with specific educational strategies, is presented.	'PESDIM', psychological theories	
Cardina & James, 2018	US	The national framework for the physical education and physical activity component of the WSCC framework is a comprehensive school physical activity program	WSCC framework	Better Movers and Thinkers (BMT)
Dalziel et al., 2019	Scotland	Better Movers and Thinkers (BMT) was designed as a novel approach to PE that directly targets the development of physical	Better Movers and Thinkers (BMT)	

Linker & Deutsch, 2020	US	competence, cognitive skills and personal qualities. SHAPE America has responded to the call to address children's SEL skills with its user-friendly health.moves.minds.® service learning program.	health.moves.minds.® service learning program	
Sprake & Walker, 2015	UK	The main strength of Physical Education lies in its ability to develop the child holistically, through a focus on the promotion of physical literacy,	develop holistically	3-Meta-theme 1 Health and Physical Literacy skill (3)
Weight et al., 2016	US	Athletes demonstrating significantly greater nutrition, health, injury knowledge, and body awareness than non-athletes.	nutrition, health, injury knowledge, body awareness	
Etkin, 2024	Canada	Explores the integration of holistic methods for PE by promoting student-centred practices and diverse activities, cultivating physical literacy while embracing self-esteem, resilience, and ecological awareness.	ecological awareness	3-Meta-theme 2 Cognitive Development (10)
Jenny & Rhodes, 2017	US	Life skill development in PE may lead to positive affective learning that may pay dividends that last a lifetime.	life skill	
Papaioannou et al., 2019	US	Interdisciplinary programs facilitate students' learning of new motor skills, as well as physics concepts and concurrently increase motivation to learn both in PE and physics.	increase motivation	3-Meta-theme 3 Social-Emotional Competencies (13)
Brunsdon & Walker, 2021	US	To develop virtuous states of character which incorporate capacities of perception, motivation, cognition and affection.	capacities of perception, motivation, cognition	
Nopembri & Sugiyama, 2022	Indonesia	The forms and types of physical activities can be a driving variable that improves psychosocial and spiritual aspects and reduces the negative psychological aspect.	improves psychosocial and spiritual aspects, reduces the negative psychological aspect	
Kreider, 2018	US	This PE program was developed to not only increase the physical capabilities of students, but also assist them in taking a lead role in their own development, both physically and academically	academically	3-Meta-theme 4 Values and Personal Growth (5)
Green et al., 2018	Canada	Rejects the notion of normative standards for ipsative judgements, thus reflecting the nature of physical literacy as it was intended.	normative standards	4-Meta-theme 1 Standardised evaluation (12)
Purnomo et al., 2024	Indonesia	Thus, investing in teacher development and adapting the education system is the key to creating a generation that is skilled, creative and ready to face future challenges.	adapting the education system	
Schenker, 2017	Sweden	An unconscious use of some of the didactic tools can support the logic of competitive sport, which is common in PEH and which contradicts teaching PA for social health.	logic of competitive sport	
Ruin & Stibbe, 2021	Germany	The specific content of the learning outcome statements focuses on a narrow, biomedical interpretation of health as preventive training and promoting conditional abilities	narrow biomedical interpretation of health	
Neto & Joao, 2022	Brazil	The dichotomy between body and mind is consequently established in this same area.	dichotomy between body and mind in this same area	4-Meta-theme 2 Mind-body dualism (5)
Baena-Morales & González-Villora, 2022	Spain	PE has traditionally been approached from two philosophies, one focused exclusively on body development and the other on the vision of the whole person (in addition to body, mind, spirit and well-being)	body, mind, spirit and well-being	
Pang, 2020	China Hong Kong	The intersections of Eastern and Western ideologies, regimes and practices left by the British legacy continue to haunt its complex cultural and social practices.	complex cultural intersections	4-Meta-theme 3 Cultural integration (2)

Thorburn & Stolz, 2015	UK	This makes it vital that a commitment towards embodied learning and school-based physical culture is matched by the pedagogical capacity for teachers	matched by the pedagogical capacity	4-Meta-theme 4 Training Teachers (11)
Escalié et al., 2017	French	A grounding in experience seems to offer heuristic possibilities for the holistic examination of teaching and learning practices that contribute to the development of the key competences, particularly when a competence is read as an experience that integrates multiple dimensions	grounding in experience	

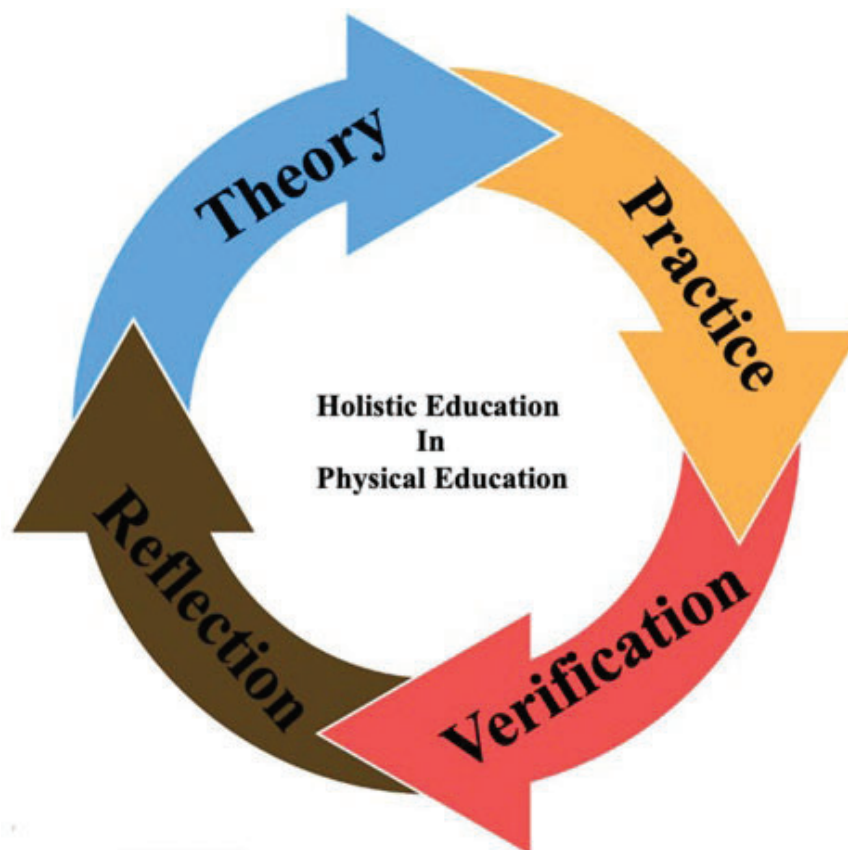


Figure 3. The Logical Closed Loop

Results

Thirty-five peer-reviewed studies were included in the final synthesis. The largest numbers were conducted in the United States, the United Kingdom, and Australia, followed by Canada, Germany, and Spain. Individual studies were also located in Greece, Norway, Sweden, Brazil, Malaysia, Japan, Indonesia, and China, indicating representation across Western and Asian settings (Figure 3). Participants included school and university students, pre-service and in-service teachers, athletes, coaches, and policy stakeholders. Conceptual and theoretical papers drew on philosophical and cultural traditions including phenomenology, Bildung, Tai Chi, Daoism, and Japanese taiiku. Qualitative designs, including case studies, ethnographies, and interpretive inquiries, accounted for approximately 57% of the studies; conceptual or theoretical analyses accounted for 23%; and quantitative or mixed-method studies accounted for 20%. The characteristics of the included studies are summarised in Table 2.

The synthesis generated 152 codes, 189 subthemes, and 15 meta-themes across four domains. The conceptualisation domain comprised three meta-themes: physical and health literacy

within holistic HPE, embodiment, and capital. The practice domain comprised physical-literacy learning, embodied learning, and interdisciplinary teaching. The outcome domain comprised physical-literacy skills, cognitive development, social and emotional competencies, values and personal growth, and health-literacy skills. The challenge domain comprised standardised assessment, mind–body dualism, disciplinary and cultural integration, and teacher preparation. Tables 4 to 7 present the full thematic classification. The following sections integrate the principal findings within each domain.

Conceptualisations of Holistic PE

The literature presents holistic PE less as a single, universally agreed definition than as a family of related educational purposes. Across cultural and educational contexts, holistic PE is framed as an integration of body, mind, emotion, relationships, values, culture, and environment. This marks a shift away from reductionist models centred primarily on fitness or technical performance towards approaches concerned with agency, identity, meaning, participation, and lifelong well-being. The relative emphasis placed on each dimension varies by context, creating multiple pathways for practice and evaluation (Miseliunaite et al., 2022). Three conceptual meta-themes were identified: physical and health literacy within holistic HPE, embodiment, and capital (Table 4). Together, they move from relatively concrete capabilities and curriculum goals to broader philosophical and social accounts of human development.

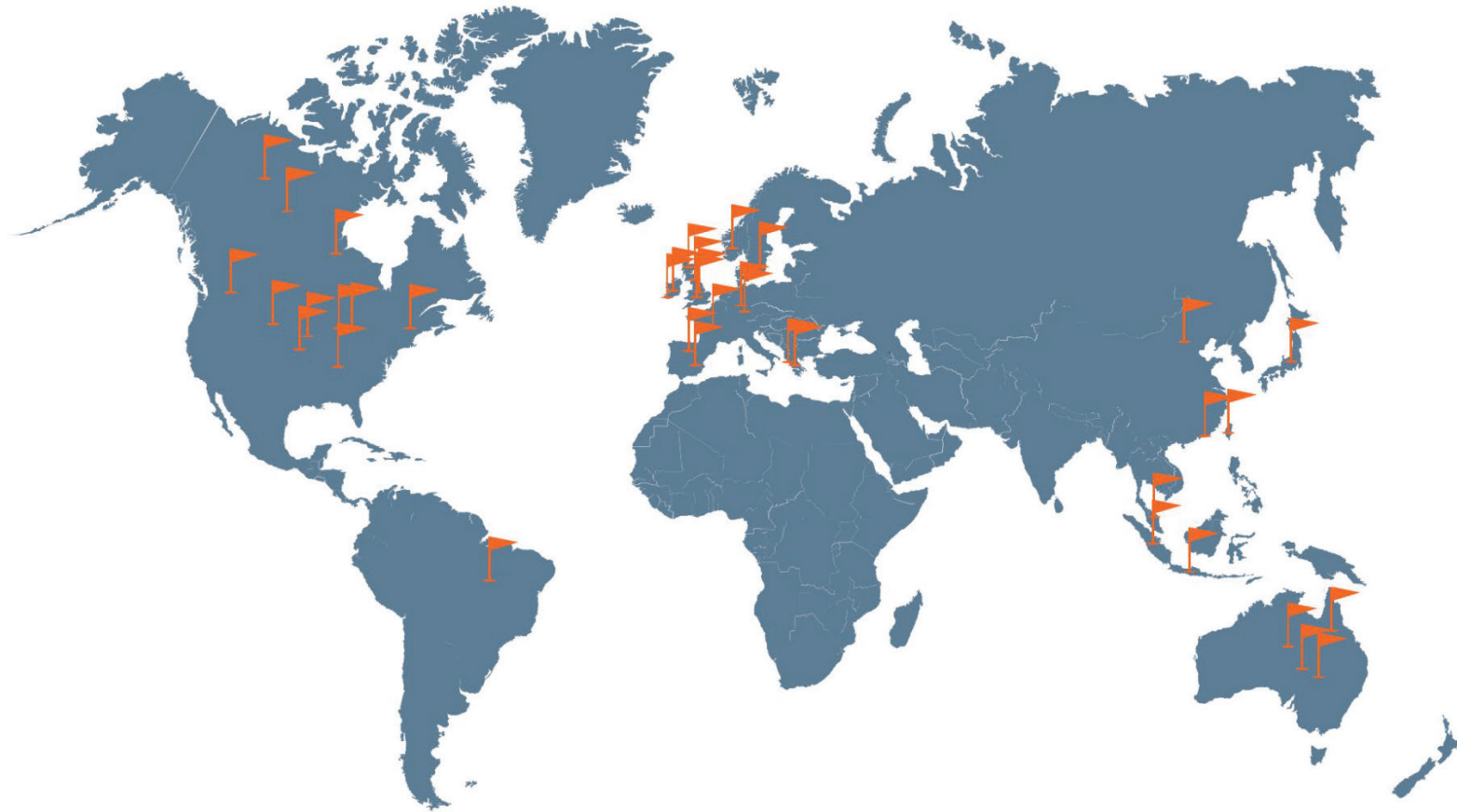


Figure 4. Geographical Distribution of the Reviewed Studies

Table 4. Thematic Classification of Holistic Education in PE - Conceptualizations (71)

1-Meta-theme 1 (38) Physical and health Literacy		1-Meta-theme (16) 2 Embodiment	1-Meta-theme 3 (14) Holistic HPE	1-Meta-theme 4 (3) “Capital”
Physical	Physical fitness	Body	Quality education	Human agency
Psychosocial	The capacity to act fairly	Mind	Health and well-being	Cultural/economic capital production
Cognitive	Take defeat well	Spirit/ Spiritual	Physical outcomes	Status attainment through bodily capital
Competence	Aesthetic capacities	Excellence	Emotional well-being	
Behavioural	Motivation/ intrinsically motivated	Friendship	Creativity	
Loyalty	Sportsmanship	Respect	Cultural expression	
Courage	Teamwork	Balance	Harmonious development of human body	
Emotional	Physical strength	Olympic ideals	Dispositional traits	
Intelligence	Physical abilities	Unity of body and mind	Balance between physical psychology	
Social	Physical outcomes	‘Usefulness of uselessness’	Characteristic adaptations	
Affective	Knowledge and understanding	Yin-Yang philosophy	Individual social integration	
Skills	Multi-dimensional health	Unity of Heaven and Humanity	Narrative identities	
Determination	Access information	Unity of body and mind	Self-awareness	
Mental	Health	Taoist philosophy	Lifelong physical activity	
Passion	Emotional well-being	‘Usefulness of uselessness’		
Confidence	Cultural expression	Cultural dimensions		
Integrated	Physical outcomes			
Physical competence	Lifelong physical activity			
Spiritual	Creativity			
	Moral/ moral dimensions of self-development			

Table 5. Thematic Classification of Holistic Education in PE - Practices (47)

2-Meta-theme 1 (2) Physical Literacy learning	2-Meta-theme 2 (25) Embodied Learning	2-Meta-theme 3 (20) Interdisciplinary teaching (Education framework / theory)	
Promotes health Promotes intelligence	Reflection capacity Integrates philosophies Integrating cultural Embodied workshop Criticism capacity Combining learning Immersion Felt meaningful Emotionally enriching Cultural expression tools Empathy Versatility	Unification internal awareness and external postures Inside-outside connectivity Bildung theory Body experience concept Phenomenology merging with reflective awareness Embodied subjectivity Perfectionism Spiritual exercise Primacy of consciousness Learn to become flexible and sensitive to various contexts Ongoing interactions with the environment	Interdisciplinary physical education for sustainable development (PESD) health.moves.minds.® servicelearning program. perspectivation and cooperative learning the Intervention Framework for Sustainable Development in Physical Education (PESDIM) Problem-based learning paradigm/ framework memetic, progressive and transformative frameworks-based pedagogies Better Movers and Thinkers (BMT) McAdams' actor- agent-author framework

Experiential learning	Interactive relationship between humanity and nature	McAdams' three-tiered personality framework
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Table 6. Thematic Classification of Holistic Education in PE - Outcomes (41)

3-Meta-theme 1 (8) Physical and Health Literacy skill	3-Meta-theme 2 (10) Cognitive Development	3-Meta-theme 3 (13) Social-Emotional Competencies	3-Meta-theme 4 (10) Values and Personal Growth
Ability, confidence and desire to be physically active for life Physical-social-mental tools Develop holistically Ability to access information, resources and services necessary to maintain and promote health Nutrition Health Injury knowledge Body awareness	Engagement Creativity throughout Articulate Movement competencies Aesthetic experiences Personal development Life skill Cognition Coordination Ecological awareness	Achieve a sense of belonging Emotional well-being Manage stress Resilience Balanced lifestyle Psycho-physical resilience Intrinsic motivation Socio-emotional self-esteem Intention to be physically active Capacities of perception Motivation Cognition Virtues	Character development Academically Disposition Confidence Capacity to express gratitude Self-awareness Self-management Social awareness Relationship skills Responsible decision-making

Table 7. Thematic Classification of Holistic Education in PE - Challenges (30)

4-Meta-theme 1 (12) Standardised evaluation	4-Meta-theme 2 (5) Mind-body dualism	4-Meta-theme 3 (2) Cultural/ discipline integration	4-Meta-theme 4 (11) Training teachers
Overly general descriptions of health Narrow view of health in PE Logic of competitive sport Vague comprehension Centred on competitive Create a personalised teaching environment Normative comparisons Narrow biomedical interpretation of health Measurement Absolute standards Normative standards Metrics-driven	Neglecting the integration of body and mind Philosophical conflict Dualistic approach Dichotomy between body and mind in this same area Body, mind, spirit and well-being	Sociocultural courses Reconceptualisation of personality in sport and exercise psychology	Sustained Development of excellence and well-being Matched by the pedagogical capacity Harness Nurture Generate Interdisciplinary collaboration grounding in experience Investing in teacher development Gauge the interest level of the class Instill a growth mind-set

Physical and Health Literacy within Holistic HPE

Physical and health literacy are among the most prominent concepts used to express holistic aims in HPE. Physical literacy provides a foundation for participation across the life course by integrating motivation, confidence, physical competence, knowledge, and understanding (Whitehead, 2010). Within PE, it is associated with experiences that enable learners to engage

meaningfully in movement and develop the capability and disposition to remain active (Bailey et al., 2023; Gleddie & Morgan, 2020; Green et al., 2018; Papaioannou, 2017; Purnomo et al., 2024; Sprake & Walker, 2015). Research on motor competence also supports the importance of developing movement capabilities early, although competence alone does not constitute holistic development (Barnett et al., 2016; Cohen et al., 2014). Health literacy, by contrast, concerns the capacity to access, understand, evaluate, and apply health information when making decisions (Kennedy et al., 2020; Shelley & McCuaig, 2019). The two constructs overlap but are not interchangeable. In PE, physical literacy can support health literacy by connecting embodied experience with knowledge, reflection, and informed choice, while health literacy broadens attention to nutrition, mental health, social conditions, and health-related decision-making (Cairney et al., 2019; Weight et al., 2016). Holistic HPE curricula therefore seek to develop both active participation and health agency. Policy frameworks increasingly position these capacities as core educational goals rather than short-term fitness outcomes (Lynch, 2024). This integration reflects the classical ideal of *kalokagathia*, the harmonious cultivation of bodily capability and sound judgement, while remaining focused on contemporary aims of lifelong health and well-being.

Embodiment

Embodiment is a central conceptual theme because it treats the body not as a passive object to be trained, but as a basis of perception, cognition, emotion, identity, and meaning (Thorburn & Stolz, 2015). It challenges mind–body dualism and emphasises that human experience is grounded in sensory-motor processes and in dynamic interaction with social and physical environments (Neto & Joao, 2022; Pang, 2020). In PE, movement can therefore function as a way of knowing, communicating, and reflecting rather than merely as a means of improving performance. Phenomenological accounts of embodied subjectivity, the concept of movingness, and research integrating physical, psychosocial, and spiritual development all extend this view (Nopembri & Sugiyama, 2022; Souza, 2023; Thorburn, 2020). Eastern philosophical traditions contribute additional perspectives on balance, non-instrumental experience, self-cultivation, and human relationships with nature. Tai Chi and Daoist thought, for example, provide frameworks for understanding bodily practice as simultaneously physical, ethical, reflective, and ecological (Xu & He, 2025; Yu & Ilundáin-Agurruza, 2016). Rather than treating Eastern and Western traditions as opposites, the reviewed literature suggests that dialogue among them can counter the utilitarian narrowing of PE and support more culturally responsive forms of holistic education.

The Potential of a Capital Perspective

The language of capital offers a further way to explain the multidimensional value of PE. From this perspective, PE is not only a setting for physical training but also a site where physical, cultural, social, and human resources can be developed (Kennedy et al., 2020). Investment in physical activity may generate long-term benefits in health, confidence, relationships, adaptability, and participation, which is why physical activity has been described as an under-recognised investment in human capital (Bailey et al., 2013). Studies of health and health literacy among student athletes similarly illustrate how educational sport can contribute to resources that extend beyond performance (Weight et al., 2016). The capital metaphor is useful because it makes the cumulative and socially situated value of PE visible. However, it also carries the risk of reducing learners to productive assets. A holistic interpretation should therefore emphasise human flourishing and relational well-being rather than economic utility alone. The idea of ecological capital may offer a complementary extension by drawing attention to the dynamic balance among physical, psychological, social, cultural, and

environmental relationships. This remains a conceptual proposition that requires further empirical development.

Practices of Holistic PE

Across the reviewed literature, practice has shifted from a predominantly skill-centred model towards the coordinated development of physical, cognitive, social, emotional, ethical, and ecological dimensions. Figure 5 illustrates this movement from isolated physical outcomes towards multidimensional integration. Three practice meta-themes were identified: physical-literacy learning, embodied pedagogy, and interdisciplinary teaching (Table 5). Although analytically distinct, these approaches frequently overlap in curriculum design and classroom practice.

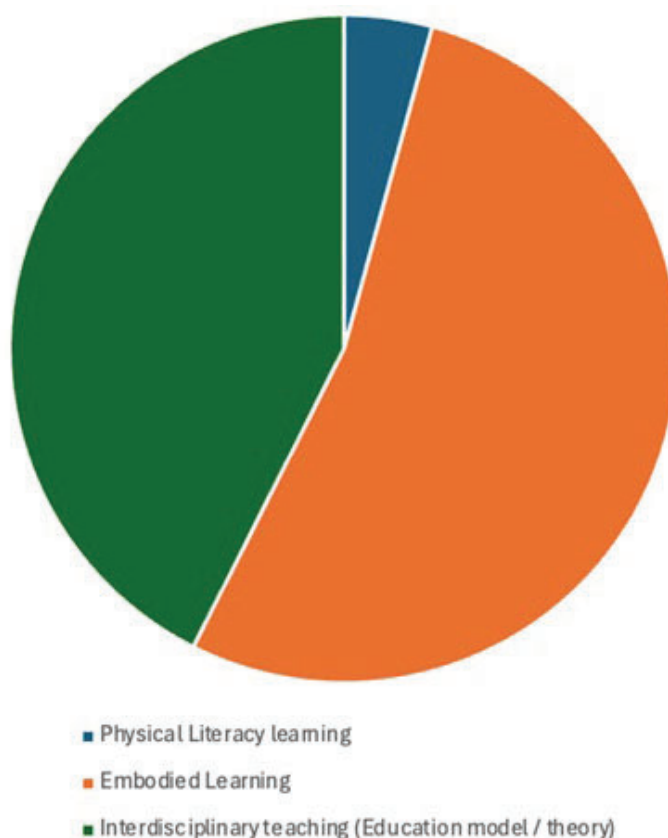


Figure 5. Comparison of the three meta-themes in practice

Embodied Pedagogy

Embodied pedagogy has become increasingly prominent in holistic PE (Thorburn & Stolz, 2015; Xu & He, 2025). It prioritises meaningful movement experiences through which learners develop confidence, bodily awareness, agency, and the capacity to sustain an active life (Sprake & Walker, 2015). Drawing on Merleau-Ponty's account of bodily subjectivity and Dewey's emphasis on experience and reflection, Thorburn (2020) argues that PE should help learners interpret and articulate what movement means, thereby deepening both self-understanding and social learning. Language, dialogue, and reflection can make bodily experience shareable and position movement as a medium of communication. Practical approaches include mindfulness, creative movement, outdoor learning, culturally meaningful activities, and reflective portfolios (Etkin, 2024; Kreider, 2018). The German concept of *Bildung* similarly emphasises self-

formation through embodied experience, reflection, and engagement with others rather than the passive receipt of knowledge (Ruin & Stibbe, 2021; Wibowo et al., 2023). In China, culturally grounded approaches draw on Yin–Yang and Daoist ideas to connect holistic education with local philosophical traditions (Xu & He, 2025). Across contexts, effective embodied pedagogy requires adaptation to learners’ cultures, developmental needs, identities, and prior experiences rather than the uniform application of a single method.

Interdisciplinary Teaching Frameworks

Interdisciplinary teaching broadens holistic PE by connecting movement with health science, psychology, ethics, sustainability, culture, and other curriculum areas. This approach counters models that treat the body primarily as a measurable machine defined by fitness indicators (Fernández-Bustos et al., 2024). The Whole School, Whole Community, Whole Child (WSCC) framework, for example, links classroom teaching with school systems, family and community relationships, health services, and student well-being (Cardina & James, 2018). Reflective health records or portfolios can support this integration by enabling students to document activity, nutrition, goals, stress management, recovery, and learning over time (Kreider, 2018). The holistic developmental movement education framework combines philosophical principles with dynamic systems theory and emphasises individual differences, bodily experience, and the coordination of multiple movement subsystems (Polsgrove & Lockyer, 2018). Coulter et al.’s (2015) three-level personality framework, which considers the person as a social actor, motivated agent, and autobiographical author, likewise encourages sport and exercise psychology to move beyond isolated traits. Sustainability-oriented models further connect PE with environmental responsibility and the Sustainable Development Goals (Baena-Morales & González-Villora, 2022; Baena-Morales et al., 2024). Embodied and interdisciplinary teaching are mutually reinforcing: embodied experience grounds abstract knowledge, while interdisciplinary connections expand the meaning of movement.

Outcomes of Holistic PE

The reported outcomes of holistic PE form an interconnected pattern rather than a set of isolated effects (Deng & Legge, 2022). Physical practice can support bodily competence and health agency, stimulate cognitive engagement, and provide contexts in which learners negotiate emotion, identity, relationships, and values (Table 6). Studies reported improvements in physical competence, coordination, activity participation, bodily awareness, and motivation for lifelong movement (Barnett et al., 2016; Cohen et al., 2014; Etkin, 2024; Papaioannou et al., 2019). Approaches that deliberately combined movement with cognitive tasks were also associated with attention, strategic thinking, coordination, and executive functioning (Dalziell et al., 2019). Health-based PE and programmes integrating social and emotional learning supported self-regulation, health-related decision-making, physical self-concept, and the application of embodied strategies to everyday well-being (Fernández-Bustos et al., 2024; Linker & Deutsch, 2020).

Holistic PE also created opportunities for social, emotional, moral, and personal development. Meaningful participation, cooperation, and responsibility-oriented pedagogy were associated with fairness, respect, empathy, prosocial behaviour, gratitude, life skills, and a stronger sense of self (Brunsdon & Walker, 2021; Jenny & Rhodes, 2017; Liu et al., 2024; Papaioannou, 2017). Studies that incorporated psychosocial and spiritual dimensions further suggested that PE can contribute to emotional balance and an integrated sense of well-being (Nopembri & Sugiyama, 2022). Critical approaches enabled students to examine relationships among health, the body, media, policy, and social inequality, thereby strengthening evaluative health literacy and moral reasoning (Ruin & Stibbe, 2021; Shelley & McCuaig, 2019). These outcomes should nevertheless be interpreted cautiously because much of the evidence was

qualitative, context-specific, or based on short-term and self-reported measures. Longitudinal and comparative research is needed to determine whether reported benefits are sustained and transferable beyond particular programmes.

Challenges of Holistic PE

Despite their multidimensional potential, holistic PE initiatives encounter structural, cultural, and professional barriers. Four challenge meta-themes were identified: standardised assessment, mind–body dualism, disciplinary and cultural integration, and teacher preparation (Table 7). These barriers interact. For example, narrow assessment systems can reinforce dualistic curriculum priorities, while limited teacher preparation can reduce interdisciplinary and culturally responsive practices.

Standardised Assessment

Holistic education is oriented towards development across time, whereas school assessment frequently privileges short-term, easily quantified indicators such as fitness scores or technical performance (Beni et al., 2021; Green et al., 2018; Ruin & Stibbe, 2021). This creates difficulties when educators attempt to evaluate less tangible outcomes, including agency, identity, reflection, values, relationships, and ecological awareness (Baena-Morales & González-Víllora, 2022; Papaioannou, 2017). The problem is intensified by broad or ambiguous definitions of health and by students' tendency to equate health with fitness alone (Haga et al., 2024; Shelley & McCuaig, 2019). Holistic outcomes may require observation across months or years, yet accountability systems often demand annual, standardised evidence (Pang, 2020; Xu & He, 2025). Competitive and didactic practices may also reproduce performance-oriented norms that conflict with aims related to social health, inclusion, and meaningful participation (Schenker, 2017; Wibowo et al., 2023). Addressing this tension requires assessment systems that combine quantitative indicators with student reflection, portfolios, observation, dialogue, and evidence of learning over time. The gap between policy aspirations and school realities therefore calls for collaborative redesign rather than isolated assessment reforms (MacPhail & Lawson, 2020).

Mind–Body Dualism

Mind–body dualism remains a conceptual and institutional barrier. When physical training is separated from intellectual, emotional, and moral development, holistic elements are easily treated as optional additions rather than as organising principles of PE (Neto & Joao, 2022; Xu & He, 2025). Research in England suggests that students may experience PE primarily as recreation, performance, or relief from academic pressure rather than as a coherent context for learning, reflection, and personal development (Hemingway et al., 2023; Sprake & Walker, 2015). Such perceptions can marginalise the subject and obscure its cognitive and social value. A holistic approach requires curriculum language, pedagogy, and assessment that recognise movement as simultaneously bodily, cognitive, affective, relational, and cultural.

Disciplinary and Cultural Integration

Curriculum reform must balance global principles with local meanings. Cultural content can become superficial when traditions are reduced to visible symbols or isolated activities without attention to their ethical, historical, and philosophical foundations. For example, teaching a martial-arts sequence without engaging with concepts such as martial virtue, balance, or human relationships with nature risks cultural tokenism. Similarly, interdisciplinary work can remain a loose collection of themes unless connections among movement, health, society, ethics, and environment are made explicit. Concepts such as the unity of humanity and nature and the “usefulness of uselessness” require interpretation and dialogue rather than simple

transplantation into a lesson (Xu & He, 2025). Sociocultural perspectives can help students develop critical corporeality, understand how bodies and health are shaped by social conditions, and reflect on the experiences of others (Coulter et al., 2015; Shelley & McCuaig, 2019). A balanced curriculum should expose learners to multiple meanings of movement and sport while allowing them to examine how these meanings vary across activities and cultures (Wibowo et al., 2023).

Teacher Education and Professional Development

Holistic PE places substantial demands on teachers. Educators need knowledge of movement and sport alongside competence in health education, psychology, inclusive pedagogy, cultural studies, reflection, and interdisciplinary curriculum design. However, teacher preparation often remains organised around isolated sport techniques and short-term performance outcomes. Frameworks such as WSCC depend on collaboration across subjects, services, families, and communities, capacities for which many teachers have limited preparation (Cardina & James, 2018). Teachers must also create time and psychological safety for students to reflect, make choices, and interpret their experiences (Escalié et al., 2017; Haga et al., 2024). Professional learning should therefore help teachers examine how existing programmes cultivate moral, civic, intellectual, and performance-related virtues, and how these aims are expressed in everyday practice (Brunsdon & Walker, 2021; Fenstermacher et al., 2009). Sustained development, mentoring, collaborative planning, and context-sensitive resources are essential if teachers are to adapt holistic principles within real constraints (Beni et al., 2021; Purnomo et al., 2024). The preparation of holistic educators is consequently not a peripheral issue but a central condition for implementation.

These challenges are not merely technical problems. They reflect broader assumptions inherited from industrial models of education, including instrumental views of the body, fragmented knowledge, and short-term accountability. Progress therefore requires coordinated reform in curriculum, assessment, teacher education, school organisation, and policy. Repositioning PE as a context for learning through the body, rather than simply training the body, is central to that reform.

Discussion

The review indicates that holistic PE is best understood as a dynamic system in which conceptualisations, practices, outcomes, and challenges continually influence one another. To integrate these dimensions and provide a structure for future research and practice, this study proposes the Holistic Physical Education Ripple Framework (HPERF; Figure 6). HPERF combines systems thinking with insights from Eastern and Western philosophies and represents whole-person development as an open, developmental process rather than a fixed programme.

The framework draws visual inspiration from the Tai Chi symbol, which represents interdependence, movement, and the complementarity of apparently opposing forces. At its centre, “Holistic Education” is linked to “PE”, indicating the application of holistic educational principles within the subject. This symbolism challenges Cartesian mind–body dualism and resonates with transdisciplinary accounts that regard body and consciousness as inseparable (Neto & Joao, 2022). It also connects with Merleau-Ponty’s account of embodied meaning and with Chinese philosophical ideas such as Wang Yangming’s unity of knowledge and action and Fan Zhen’s inseparability of form and spirit (Wang et al., 2025; Wong, 2025). Around the centre, four ripple-like quadrants represent conceptualisations, practices, outcomes, and challenges. Bidirectional arrows indicate that the domains are mutually influential rather than linear. The open boundaries allow meta-themes to be revised, expanded, or reorganised as evidence develops (Popper, 2005). Similar ripple-based frameworks have been used to

represent relational and co-produced value in health and care contexts, supporting the use of this form for a flexible and collaborative model (Soares & Kettley, 2024).

HPERF is intended to be both analytical and generative. For researchers, it offers a taxonomy for mapping the 15 meta-themes, identifying conceptual gaps, and comparing evidence across settings. For educators, it can support a cyclical process of curriculum development: clarify a holistic learning aim, design an embodied or interdisciplinary learning experience, examine multidimensional outcomes, identify constraints, and refine the next iteration. The framework can also be used to evaluate whether a programme addresses the whole learner or merely adds isolated well-being activities to a conventional performance model. Its incomplete ripple structure is deliberate, inviting future studies and practitioners to add, revise, or challenge themes. HPERF should therefore be treated as a provisional organising framework rather than a validated causal model. Future research should test its clarity, usefulness, and transferability across age groups, cultures, educational systems, and forms of physical activity. Such work should proceed through critical dialogue, empirical testing, and iterative revision (Mabovula, 2010).

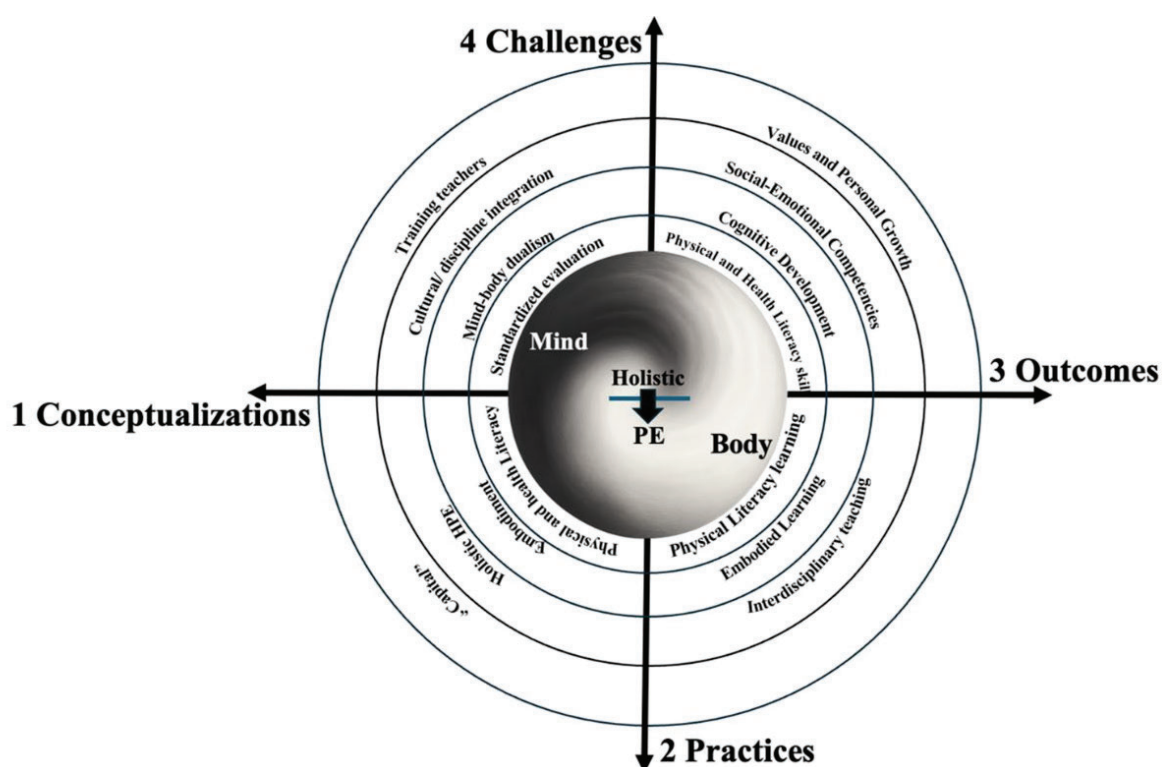


Figure 6. Holistic Physical Education Ripple Framework (HPERF)

Limitations

Several limitations should be considered when interpreting this review. First, the database selection and exclusion of grey literature may have omitted relevant studies in specialist, regional, or practice-oriented sources. Second, the English-language restriction and the use of predominantly Anglophone search terms may have overlooked culturally specific accounts of mind–body integration and holistic education. Third, the 2015–2025 publication window prioritised contemporary practice but excluded earlier empirical and conceptual work from the formal synthesis, creating a risk of recency bias. Fourth, the review focused on formal educational contexts and did not examine teacher development, community sport, or professional sport as separate bodies of evidence. Fifth, screening, data extraction, and coding

were conducted by a single researcher. Repeated review and external feedback strengthened transparency but did not substitute for independent duplicate screening and coding. The review also did not provide a formal appraisal of methodological quality across the heterogeneous empirical and conceptual studies, which limits the certainty with which outcome claims can be interpreted. Finally, the proposed HPERF is a conceptual synthesis derived from the included literature and has not yet been empirically validated. Future reviews should use multilingual search strategies, broader database coverage, duplicate review procedures, and explicit quality appraisal, while future empirical work should examine the framework's reliability and practical value.

Conclusion

This review shows that holistic PE is not defined by a single method but by a commitment to integrating physical, cognitive, emotional, social, ethical, cultural, and ecological development through movement (Kirk, 2009). Across the literature, physical and health literacy, embodiment, and the development of personal and social resources provided the principal conceptual foundations. Embodied, reflective, culturally responsive, and interdisciplinary pedagogies translated these ideas into practice, while reported outcomes extended beyond physical competence to cognition, self-regulation, relationships, values, and health agency.

The findings also demonstrate that implementation depends on the systems surrounding teaching. Standardised assessment, persistent mind–body dualism, superficial cultural integration, and gaps in teacher preparation can prevent holistic principles from becoming part of everyday PE. Addressing these barriers requires aligned reform in curriculum, assessment, professional learning, policy, and school organisation. The HPERF brings these relationships together in a flexible visual structure and offers a practical means of moving between educational aims, pedagogical design, observed outcomes, and implementation challenges.

HPERF should be regarded as a starting point for cumulative inquiry rather than a finished model. Longitudinal, comparative, and implementation studies are needed to examine whether holistic PE produces sustained benefits, for whom, and under which educational and cultural conditions. Future research should also develop credible multidimensional assessment approaches and test the framework in collaboration with students, teachers, schools, and communities. Through such work, PE can be repositioned from a narrowly performance-oriented subject to a central context for learning through the body and supporting whole-person flourishing.

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Declaration of Generative AI and AI-Assisted Technologies in the Writing Process

During the preparation of this manuscript, the author(s) used ChatGPT to assist with improving language clarity, grammar, and phrasing. The author(s) carefully reviewed and revised the output to ensure accuracy and take(s) full responsibility for the content of the final manuscript.

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Ethics Statement

Ethical approval was not required because this systematic review synthesised previously published literature and involved no human participants or identifiable personal data.

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