

Original Article

Upskilling India's Physical Education Teachers: Aligning National Education Policy 2020 with UNESCO–Loughborough Quality Physical Education Priorities

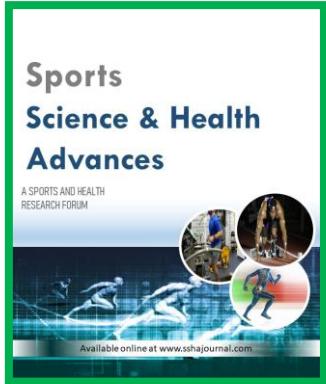
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Abstract

As Part of the National Policy on Education 2020 and Quality Physical Education as defined by UNESCO and Loughborough University in 2024, this paper addresses the urgent need for upskilling Physical Education (PE) teachers in India. This paper attempts to analyze the systemic barriers in teachers' preparation, professional development, and educational/ institutional framework of educational systems that impede the fulfillment of educational goals. The paper discusses the evolving expectations of PE teachers of the Indian Education System, under the National Policy, the PE teachers are expected to create literate individuals in the domain of physical activities, and as inclusive and holistic wellness advocates. Having researched on PE teachers satisfaction and professional development systems, the SMART teacher, the paper offers an assimilative solution system of upskilling teachers that satisfy the global QPE and the Indian educational policy. The paper concludes that PE teachers are great assets to the educational systems due to great potential of delivering meaningful learning experiences that are both transformative and holistic. The paper further discusses the necessity of adequate institutional investment in the educational systems professional development, training and support systems that will positively impact the teachers and educational systems.

Keywords: Professional development, PE teacher, NEP 2020, UNESCO, Physical literacy, Teacher upskilling

Introduction

The introduction of the National Education Policy (NEP) is undergoing a radical shift in the Indian education system. NEP is the first major educational reform of the 21st century and is now the country's first policy to shift from a content-based learning approach to a more integrated and competency-based model. As part of this policy, teachers are considered the most important pieces of educational change, and NEP 2020 even states that "the teacher must be at the center of fundamental reforms in the education system (Ministry of Education, 2020b).

At the same time, the ongoing global discourse around education has begun to realize the impact of Quality Physical Education (QPE)

on the multi-dimensional positively propelling, fostering, and sustaining healthy active lifestyles and attaining educational success. The most recent report from UNESCO Loughborough University (2024) on Quality Physical Education (QPE) brings to the fore global or worldwide challenges such as underinvestment, insufficient teacher training, and inadequate educational facilities in QPE (UNESCO and Loughborough University, 2024). The report has identified five of the most relevant QPE improvement QPE action priorities, which are (1) more investments in QPE, (2) improving educational qualification and skills of PE teachers, (3) modernizing QPE curriculum, (4) improving PE governance and accountability mechanisms, and (5) promoting and supporting equitable and inclusive PE.

The NEP 2020's focus on experiential learning, inclusive education, and overall development is in line with these global preferences. The sports and fitness component of the NEP 2020 is recognized as an important aspect of education as it helps to develop an individual who is healthy, both in body and mind. In this regard, the need to enhance the skills of PE teachers stands out in the Indian context, as PE teachers deal with a lack of training, insufficient professional development, and outdated training in the promotion of holistic health and 21st century skills.

This paper examines the upskilling needs of Physical Education teachers in India in relation to the National Education Policy 2020 and the Quality Physical Education priorities identified by UNESCO and Loughborough University in 2024. It identifies gaps in teacher preparation, access to training, and professional support. It outlines the need for stronger teacher competencies, evolving expectations in Indian schools, and the relevance of the SMART framework. The paper aligns global recommendations with NEP 2020 and proposes measures to strengthen the Physical Education workforce in India.

Table 1 Alignment Between UNESCO QPE Priorities and NEP 2020 Objectives

UNESCO QPE Priority (2024)	Corresponding NEP 2020 Objective	Implementation Focus for India
Upskilling PE teachers	Continuous professional development	Competency-based training, digital pedagogy, inclusive practices
Enhancing PE curricula	Holistic, experiential learning	Physical literacy integration, play-based approaches
Inclusive PE environments	Equitable, inclusive education	Differentiated instruction, universal design
Monitoring & evaluation	Competency based assessment	Developmental portfolios, holistic progress cards
Increased investment	Resource allocation for foundational stages	Infrastructure development, teacher support systems

Current Status of Physical Education Teachers in India: Gaps and Challenges

The professional environment for Physical Education teachers in India continues to show disparities between policy expectations and routine practice. NEP 2020 places teachers at the center of educational improvement, yet many PE teachers face structural barriers that affect their work and professional growth (Shirotriya and Beighle 2023). Limited access to consistent professional development remains a concern. Irregular training opportunities weaken teaching quality and reduce the overall effectiveness of Physical Education in schools. A study involving 733 primary and secondary school Physical Education teachers reported that faculty support is positively associated with career satisfaction (Zhang et al., 2024). The analysis found that professional self-concept and work engagement act as mediating factors in this association. The study identified three indirect pathways that contribute to the overall effect, indicating that psychological and behavioral mechanisms play an important role in

Shaping career satisfaction among PE teachers.

Many Indian schools show limited support for teachers who seek workshops, training programs, or advanced certifications. Leave requests are often denied, and financial assistance is rarely provided (Ministry of Education, 2020a; IDR Team, 2023). These conditions restrict professional growth and weaken teachers' professional self-concept. Reduced institutional support also lowers work engagement, which contributes to lower

career satisfaction and a higher likelihood of attrition. Common misconceptions about the work of Physical Education teachers add to these difficulties. PE is often viewed as physical training or sports classes, which overlooks its structured educational purpose of building knowledge, skills, values, and attitudes that support lifelong physical activity. Studies by [Shirotriya \(2015\)](#), [Christian et al. \(2022\)](#), and [Singh \(2023\)](#) show that these misconceptions are linked to lower job satisfaction and higher occupational stress among PE teachers.

The foundational stage, ages 3 to 8, identified in NEP 2020 as essential for holistic development, presents specific challenges for Physical Education. Physical literacy at this stage

involves competence, motivation, and confidence in movement, and it supports inclusive education ([Parmar et al., 2024](#)). There is a mismatch between policy objectives and classroom practice because a large number of early childhood teachers lack physical literacy training. This distinction is important because research shows that early childhood motor ability predicts later outcomes in terms of fitness, physical activity, and weight status [Robinson et al. \(2015\)](#).

Conceptual Framework for Upskilling: Integrating SMART Principles with NEP 2020 Objectives

The Reconceptualized SMART Framework

A framework that considers the varied roles played by physical education instructors is necessary due to their varying responsibilities. The SMART model, which stands for Supervisor, Manager, Teacher, Researcher, and Trainer, was first introduced by [Shirotriya \(2016\)](#). Later, this concept was revised to meet the demands of contemporary educational environments. The updated version defines the responsibilities of supervisor, motivator, supporter, researcher, and teacher ([Shirotriya and Beighle, 2022](#)).

In the Indian context, this redefined SMART framework strongly aligns with the NEP 2020's emphasis on holistic education, interdisciplinary learning, and enhancing the professional skills of teachers:

1. **Executive:** Physical education teachers oversee a safe and inclusive activity culture, as well as effectively manage resources. This observational role involves executing comprehensive school physical activity programs that extend far beyond scheduled physical education classes.
2. **Motivator:** Through positive engagement strategies, physical education teachers inspire students to develop intrinsic motivation for physical activity, which leads to life-long active and healthy habits ([Shirotriya and Beighle, 2025](#)).
3. **Advocate:** As advocates for physical literacy and well-being, physical education teachers promote the educational value of their subject to administrators, parents, and the broader community.
4. **Researcher:** Engaging in action research and thoughtful practice allows physical education teachers to systematically improve their teaching approaches and contribute to the professional knowledge base.
5. **Teacher:** This core function involves designing and presenting developmentally apt, comprehensive direction that develops physical competency, cognitive insight, and positive attitudes toward movement.

Alignment with NEP 2020 Priorities

Several essential elements of NEP 2020 are compatible with the SMART framework. High quality physical education programs that include children in consistent physical activity

are a natural manifestation of the policy's emphasis on empirical learning. The integrated spirit of physical education, which links physiological principles with psychological, social, and cognitive aspects of learning, supports the interdisciplinary approach that NEP 2020 encourages.

Furthermore, NEP 2020's emphasis on basic literacy and numeracy conceptually broadens to encompass physical literacy the drive, self-assurance, physical proficiency, knowledge, and comprehension to appreciate and accept responsibility for engaging in physical activities throughout one's life (Whitehead, 2010). Research shows that early motor skills have a considerable impact on later physical activity participation, perceived sports competence, and fitness levels, making the foundation stage (ages 3–8) an important stage for establishing physical literacy (Stodden et al., 2008).

Physical literacy is also a major catalyst for inclusive education in the early stages. By incorporating physical literacy into early childhood programs, educators may meet a variety of learning needs and ensure that all children, including those with disabilities, have equitable access to educational experiences (Parmar et al., 2024). This inclusive approach is in line with the NEP 2020's commitment to equitable education that meets the needs of all learners, regardless of background or ability.

Table 2 SMART Framework Components and Corresponding Upskilling Priorities

Smart Component	NEP 2020 Alignment	Upskilling Focus Areas
Supervisor	Safe, inclusive learning environments	Safety protocols, inclusive pedagogy, activity adaptation
Motivator	Holistic development	Motivational strategies, student engagement techniques
Advocate	Community participation	Communication skills, advocacy strategies, parent engagement
Researcher	Evidence-based teaching	Action research, data-informed practice, reflective teaching
Teacher	Competency-based learning	Pedagogical content knowledge, differentiated instruction

Upskilling Strategies and Implementation Mechanisms

Continuous Professional Development Models

Addressing the upskilling imperative requires moving beyond sporadic, certificate-oriented programs toward sustained, meaningful professional learning. The UNESCO-Loughborough report (2024) highlights that while 70.5% of countries offer in-service training for PE teachers, the irregularity and inconsistent quality of these programs limit their effectiveness (UNESCO and Loughborough University, 2024). NEP 2020 advocates for continuous professional development that integrates pedagogical knowledge with content expertise, creating opportunities for teachers to evolve as reflective practitioners (Singh and Sarma, 2025).

Effective upskilling programs should incorporate several key components:

1. **Pedagogical Content Knowledge Enhancement:** Beyond sports skills, PE teachers need specialized knowledge about how students learn movement concepts, develop motor skills, and form attitudes toward physical activity. This includes understanding developmental progressions, effective instructional cues, and error detection/correction strategies.
2. **Technology Integration:** Digital tools offer transformative potential for PE instruction, from activity trackers that promote self-monitoring to video analysis applications that provide performance feedback. Uppskilling programs should develop teachers' technological pedagogical content knowledge (TPACK) specific to physical education contexts (SCERT Delhi, 2024).
3. **Inclusive Practice Development:** With NEP 2020's emphasis on equitable education, PE teachers require training in differentiated instruction, universal design for learning, and adaptive physical education strategies to ensure all students can participate meaningfully.
4. **Assessment Literacy:** Competency-based assessment aligned with NEP 2020 requires teachers to design authentic evaluations of physical literacy components, including not only skill execution but also cognitive understanding, effort, and social responsibility (Verma and Sharma, 2023).

Institutional Support Systems

The research on faculty support's impact on career satisfaction highlights the necessity of systemic approaches to upskilling (Zhang et al., 2024). Institutional mechanisms should include:

1. **Structured Mentoring Programs:** Pairing experienced PE teachers with newcomers facilitates knowledge transfer and provides emotional support, enhancing professional self-concept and work engagement.
2. **Professional Learning Communities:** Creating collaborative spaces where PE teachers can share practices, solve problems collectively, and engage in peer observation promotes continuous improvement and reduces professional isolation (IDR Team, 2023).
3. **Resource Allocation:** Schools must allocate sufficient time, funding, and materials for PE teachers to implement quality programs and pursue professional development opportunities. This includes providing coverage for teachers attending training sessions and investing in appropriate equipment and facilities (Ministry of Education, 2020a).
4. **Leadership Development:** Preparing PE teachers for leadership roles within comprehensive school physical activity programs enable them to influence school-wide culture around physical activity and wellness (Shirotriya and Beigle, 2022).

Conference and Networking Opportunities

The growing number of Physical Education conferences in India and the Asia Pacific region provides important opportunities for professional development. India has become a prominent host for international PE conferences, with several events planned for 2025 to 2026 that bring together researchers, practitioners, and policymakers (Shirotriya and Beigle, 2025). These events support knowledge exchange, introduce new practices, and strengthen professional networks.

The PHASE community, which focuses on Physical Education, health, athletics, and sports experiences, organizes major regional conferences, including PHASE Asia Pacific 2025 in Singapore and PHASE China 2026 in Shanghai (Shirotriya and Beigle, 2025). These events include presentations from leading professionals in Physical Education, health education, and athletics, and they offer access to recent practices and research. International conferences provide useful exposure but strengthening national and regional conference networks within India would make such opportunities more accessible for teachers who have limited travel resources (Verma and Sharma, 2023).

Conference participation should move beyond passive attendance. Teachers benefit when they present, lead workshops, and join collaborative sessions. Schools and education authorities can strengthen this engagement by offering funding, time allowances, and recognition for teachers who contribute to professional conferences (SCERT Delhi, 2024).

Digital and Blended Learning Approaches

The post pandemic education environment has increased the use of digital learning options that support PE teacher upskilling. Asynchronous online courses, webinars, and virtual communities of practice offer flexible and scalable development opportunities for teachers in remote or underserved regions (IDR Team, 2023). These digital formats work best when paired with in person workshops that provide practical skill practice and direct feedback (SCERT Delhi, 2024).

Micro-credentialing and digital badging systems can provide recognition for discrete competency development, allowing teachers to demonstrate proficiency in specific areas such as inclusive pedagogy, technology integration, or assessment design (Ministry of Education, 2020a). These credentials can be stacked toward more comprehensive certifications, creating pathways for progressive professional development aligned with career stages (Singh and Sarma, 2025).

Impact Assessment and Sustainability Considerations

Evaluating Upskilling Outcomes

Measuring the impact of upskilling initiatives requires multi-dimensional assessment frame- works that capture changes in teacher competencies, instructional practices, and ultimately student outcomes (UNESCO and Loughborough University, 2024). Effective evaluation should consider

1. **Teacher-Level Outcomes:** Changes in pedagogical content knowledge, instructional practices, professional self-concept, work engagement, and career satisfaction. The chain mediation model identified by recent research suggests that institutional support influences career satisfaction through professional self-concept and work engagement (Zhang et al., 2024), indicating these constructs should be included in impact assessments.
2. **Instructional Quality Indicators:** Implementation of evidence-based teaching practices, provision of inclusive learning environments, integration of technology, and use of competency-based assessment strategies (Shirotriya and Beighle, 2022).
3. **Student Outcomes:** Development of physical literacy components (competence, confidence, motivation), physical activity levels, holistic health indicators, and cognitive/academic performance (Robinson et al., 2015). Research indicates that quality PE can contribute to improved concentration, classroom behavior, and academic achievement, providing compelling evidence for program value.
4. **Systemic Factors:** Institutional support mechanisms, resource allocation, and pol- icy implementation fidelity that create enabling environments for quality PE delivery (Ministry of Education, 2020b).

Building Sustainable Systems

Sustainability of upskilling initiatives requires embedding professional development within systemic structures rather than treating it as peripheral programming (IDR Team, 2023). Key sustainability strategies include:

1. **Policy Integration:** Incorporating PE teacher upskilling requirements into broader teacher education policies, accreditation standards, and career progression frameworks creates systemic incentives for continuous development (Ministry of Education, 2020a).
2. **Resource Commitment:** Dedicated budgeting for PE professional development at national, state, and institutional levels ensures consistent funding rather than reliance on sporadic grants or initiatives (UNESCO and Loughborough University, 2024).
3. **Leadership Development:** Investing in PE teacher leadership creates a cadre of change agents who can drive improvement within their schools and regions, creating a multiplier effect for upskilling efforts (Shirotriya and Beighle, 2022).
4. **Research-Practice Partnerships:** Collaborative relationships between universities, research institutions, and schools facilitate evidence-based program design and continuous improvement through data-informed refinement (Shirotriya and Beighle, 2025).
5. **Community Engagement:** Involving parents, community organizations, and local governments in supporting quality PE creates broader constituencies invested in teacher development and program sustainability (Parmar et al., 2024).

Conclusion and Future Directions

The alignment between NEP 2020 and UNESCO's Quality Physical Education priorities presents a strategic opportunity to transform physical education in India from a marginalized subject to a central component of holistic education (Ministry of Education, 2020b; UNESCO and Loughborough University, 2024). Upskilling PE teachers represents

the most critical leverage point in this transformation, requiring concerted efforts to address systemic gaps in professional preparation, development, and support.

The reconceptualized SMART framework provides a comprehensive model for envisioning the multifaceted roles of future-ready PE teachers as supervisors, motivators, advocates, researchers, and educators (Shirotriya and Beighle, 2022). When integrated with NEP 2020's emphasis on experiential learning, inclusive education, and holistic development, this frame-work guides the design of upskilling programs that develop the competencies needed for 21st-century physical education.

Empirical research underscores that institutional support significantly influences PE teachers' career satisfaction through the mediating mechanisms of professional self-concept and work engagement (Zhang et al., 2024). This finding highlights the necessity of systemic approaches that combine competency development with strengthened support structures, rather than focusing exclusively on individual skill training.

Future directions should include the development of national PE teacher standards aligned with NEP 2020 objectives, creation of specialized professional development pathways for different career stages, and establishment of robust mentoring and support networks (Ministry of Education, 2020a; SCERT Delhi, 2024). Additionally, research should investigate the specific upskilling needs of teachers working in diverse Indian contexts, from urban private schools to rural government institutions, ensuring that development approaches address con-textual realities (Singh, 2023).

As India continues its educational transformation journey, investing in PE teacher upskilling represents not merely an enhancement of subject-specific instruction but a strategic investment in the holistic development of future generations (Parmar et al., 2024). By building a capable, motivated, and well-supported PE teaching workforce, India can realize the vision of NEP 2020 while contributing to global progress toward Quality Physical Education for all learners (UNESCO and Loughborough University, 2024).

Conflict of Interest:

No conflict of interest was declared among authors.

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