



# Embedding Pedagogical Intelligence in ITEP for Developing Adaptive and Ethical Teachers

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## Abstract

This paper examines the integration of Pedagogical Intelligence (PI) within the Integrated Teacher Education Programme (ITEP) as envisioned by the National Education Policy (NEP 2020) to prepare adaptive and ethical teachers for 21st-century classrooms. Drawing upon the theoretical contributions of Gardner (1983, 2022), Rubin (1989), and Sternberg (1985), the study conceptualizes PI as a multidimensional construct comprising cognitive, emotional, and ethical dimensions of teaching. The essential components of PI situational awareness, empathetic awareness, cognitive flexibility, and reflective intuition are identified as foundational attributes that enable teachers to demonstrate adaptive expertise, professional judgment, and moral sensitivity in diverse learning contexts. Through a conceptual and policy analysis approach, the paper argues that embedding PI in ITEP can enhance teacher quality by transforming teacher preparation from content delivery to judgment-based, reflective, and value-driven practice. It underscores how PI fosters responsiveness to learners' needs, supports contextually relevant pedagogy, and aligns with NEP 2020's vision of developing teachers as creative, compassionate, and ethical professionals. The role of teacher educators is highlighted as pivotal in modelling and mentoring PI through reflective practicum, dialogic engagement, and experiential learning. In conclusion, the study assumes the deliberate integration of Pedagogical Intelligence within ITEP can operationalize the NEP's transformative goals, producing teachers who think critically, act reflectively, and teach ethically thereby bridging the gap between policy aspiration and classroom reality.

*Keywords:* pedagogical intelligence, integrated teacher education programme (ITEP), NEP 2020, reflective practice, adaptive teaching, ethical pedagogy, teacher quality

## INTRODUCTION

The evolving educational landscape of the 21st century demands teachers who are not only subject experts but also adaptive, reflective, and ethically grounded professionals capable of addressing the complex learning needs of diverse classrooms. In India, the National Education Policy (NEP 2020) envisions such teachers as "empathetic, innovative, and committed to continuous professional growth" (Ministry of Education, 2020, p. 22). To achieve this vision, the Integrated Teacher Education Programme (ITEP) was introduced by the National Council for Teacher Education (NCTE) as a four-year multidisciplinary model designed to integrate academic depth with pedagogical expertise and ethical formation (NCTE, 2023). Despite these reforms, there remains a pressing need to conceptualize the intelligence that supports effective teaching an intelligence that fuses cognition, emotion, and morality into professional judgment and adaptive practice.

This paper introduces and explores Pedagogical Intelligence (PI) as that integrative framework. The concept, derived from Howard Gardner's (1983, 2022) theory of multiple intelligences, extends beyond traditional measures of teacher competence to include the ability to understand how others learn and to adjust teaching

accordingly. PI summarize the teacher's capacity to combine situational awareness, empathetic understanding, cognitive flexibility, and reflective intuition, forming a foundation for effective and ethical pedagogy.

Embedding PI within ITEP holds transformative implications for teacher development in India. Sternberg's (1985) notion of practical intelligence knowing how to act effectively in real-world situations resonates deeply with NEP 2020's call for contextually responsive pedagogy. Paniş (2023) emphasizes that ethical pedagogical intelligence enables teachers to make value-driven judgments rooted in care, fairness, and social awareness. Integrating these dimensions into teacher education ensures that teachers are equipped not only with knowledge but also with wisdom in action.

This study argues that incorporating Pedagogical Intelligence into ITEP can bridge the gap between policy aspirations and classroom realities. It aims to develop teachers who embody adaptive expertise, reflective intuition, and ethical discernment, aligning with NEP 2020's vision of a professionally competent and morally conscious teaching community prepared to shape India's educational future.

## OBJECTIVES

To conceptualize Pedagogical Intelligence (PI) as a multidimensional construct encompassing cognitive, emotional, and ethical aspects of teaching.

To analyze the relevance and implications of Pedagogical Intelligence within the framework of the Integrated Teacher Education Programme (ITEP) as envisioned by the National Education Policy (NEP 2020).

To highlight the role of teacher educators in modelling and mentoring Pedagogical Intelligence during pre-service training.

To identify essential components of PI that contribute to adaptive, reflective, and ethical teaching practice.

## OBJECTIVE ANALYSIS

**To conceptualize Pedagogical Intelligence (PI) as a multidimensional construct encompassing cognitive, emotional, and ethical aspects of teaching.**

Pedagogical Intelligence (PI) can be conceptualized as a multidimensional construct that integrates cognitive, emotional, and ethical dimensions of teaching to enable educators to make contextually appropriate and morally sound instructional decisions. Drawing upon the literature on teacher cognition, emotional intelligence, PI exceed content or pedagogical knowledge; it represents a synthesis of knowing, feeling, and doing in the educational space (Shulman, 1987; Sternberg, 1997).

From the cognitive perspective, PI includes teachers' capacity to understand learner diversity, design adaptive pedagogical strategies, and engage in reflective decision-making during instruction. It aligns closely with Shulman's concept of Pedagogical Content Knowledge (PCK), yet extends it by incorporating the ability to perceive situational cues and adapt instruction dynamically an essential requirement for the Integrated Teacher Education Programme (ITEP) under the National Education Policy (NEP) 2020.

The emotional dimension of PI relates to the teacher's empathetic awareness, relational understanding, and ability to respond to learners' affective needs. This element reflect Goleman's (1995) emotional intelligence framework and is essential for developing inclusive and compassionate classrooms. In the ITEP context, emotional components of PI can be cultivated through reflective practice, peer mentoring, and community engagement activities that nurture social-emotional learning (NCTE, 2023).

The ethical dimension of PI encompasses moral reasoning, fairness, and professional responsibility. As NEP (2020) advocates for "rootedness in ethics and integrity" as a central pillar of teacher education, embedding the ethical strand within PI ensures that teachers not only act effectively but also act rightly. This align with the vision of NEP and ITEP to prepare educators as "role models demonstrating humanistic and constitutional values" (NCTE, 2023).

Pedagogical Intelligence emerges as synthesis of cognitive, emotional, and ethical faculties enabling teachers to make situationally appropriate, emotionally attuned, and ethically grounded decisions. Conceptualizing PI in this multidimensional manner offers a theoretical foundation for restructuring ITEP curricula to produce adaptive and ethical teachers, capable of navigating the moral and pedagogical complexities of contemporary education

**To analyze the relevance and implications of Pedagogical Intelligence within the framework of the Integrated Teacher Education Programme (ITEP) as envisioned by the National Education Policy (NEP 2020).**

The Integrated Teacher Education Programme (ITEP) proposed by the National Education Policy (NEP 2020) aims to create a holistic, multidisciplinary, and ethically grounded system for teacher preparation. Within this vision, Pedagogical Intelligence (PI) becomes a vital conceptual tool that operationalizes NEP's call for adaptive, empathetic, and reflective educators. As Gardner (1983, 2022) explains, pedagogical intelligence represents an educator's ability to perceive learners' needs, anticipate difficulties, and adjust teaching strategies in real time a distinct cognitive emotional capacity beyond subject expertise. This aligns directly with NEP 2020's emphasis that teachers must be knowledgeable, creative, and adaptive professionals capable of designing learning environments responsive to diverse student contexts (Ministry of Education, 2020).

Rubin (1989) further conceptualizes PI as reflective intuition and context-sensitive judgment, enabling teachers to balance technical competence with professional autonomy. His framework resonates with NEP 2020's advocacy for autonomous and reflective practitioners rather than only "technicians" of curriculum delivery. Sternberg's (1985) construct of practical intelligence the capacity to "read" situations and select effective responses maps neatly onto the adaptive decision-making envisioned in ITEP classrooms.

Embedding Pedagogical Intelligence (PI) within teacher education frameworks such as the Integrated Teacher Education Programme (ITEP) has significant implications for strengthening teacher quality and promoting responsiveness to India's highly diverse educational contexts. NEP 2020 calls for teachers who embody "integrity, empathy, and adaptability" and who possess the competence to nurture holistic learning outcomes (Ministry of Education, 2020). Pedagogical Intelligence provides a multidimensional foundation for realizing these aims by developing teachers who are cognitively reflective, emotionally coordinated, and ethically grounded in their pedagogical choices.

Gardner (1983, 2022) views pedagogical intelligence as the ability to understand how others learn and to adapt teaching accordingly, drawing on both interpersonal and intrapersonal awareness. This dual orientation enhances teacher quality by integrating emotional and cognitive competencies. It enables teachers to diagnose learners' needs, regulate classroom dynamics, and personalize instruction a critical skill in multilingual, multi-ability classrooms characteristic of India's schooling landscape. Sternberg's (1985) idea of practical intelligence emphasize the real-time decision-making teachers must exercise in unpredictable educational situations, reinforcing the link between PI and professional judgment.

The NCTE ITEP (2023) underscores the integration of disciplinary knowledge, pedagogy, and practicum experiences within a four-year structure. Such integration offers fertile ground for embedding the cognitive dimension of PI through interdisciplinary coursework and the emotional ethical dimensions through practicum reflection, mentorship, and community immersion.

Pedagogical Intelligence provides the theoretical and operational core through which NEP 2020's transformative ideals can be realized in ITEP. Embedding PI across cognitive, emotional, and ethical domains ensures that the next generation of teachers are not only academically prepared but also adaptive, compassionate, and ethically responsible professionals who embody the humanistic essence of the NEP vision.

## **To highlight the role of teacher educators in modelling and mentoring Pedagogical Intelligence during pre-service training.**

Teacher educators serve as the primary transmitters and exemplars of Pedagogical Intelligence (PI) within pre-service teacher education. Their actions, attitudes, and instructional decisions act as lived models of how cognitive, emotional, and ethical dimensions of pedagogy can be integrated into real teaching practice. The National Education Policy (NEP 2020) envisions teacher educators as “role models who combine depth of knowledge, pedagogical competence, and commitment to values” (Ministry of Education, 2020, p. 22). Embedding PI within their professional identity transforms them from content deliverers into reflective practitioners who mentor prospective teachers through experiential learning, observation, and guided reflection.

Gardner’s (1983, 2022) conception of pedagogical intelligence as the ability to understand how others learn and to adapt teaching accordingly provides a foundation for teacher educators to model cognitive flexibility and diagnostic teaching. For instance, when a teacher educator modifies a microteaching session in response to a student-teacher’s confusion by offering an alternative explanation or analogy they demonstrate the adaptive responsiveness that defines PI. Such modelling helps pre-service teachers internalize that effective teaching is not rigid execution but an intelligent adaptation to learners’ cues.

Rubin (1989) further argues that pedagogical intelligence distinguishes “thinking teachers” from “technicians,” emphasizing context-sensitive judgment and reflective intuition. Teacher educators embody this principle when they openly discuss their instructional decisions for example, explaining why they chose a specific questioning technique during a practicum lesson. This transparency makes the invisible cognitive processes of expert teaching visible, fostering reflective awareness among student-teachers.

In the ITEP framework, teacher educators function not only as instructors but as professional mentors guiding students through four years of integrated academic and practicum experiences (NCTE, 2023). They can embed PI by incorporating:

- Reflective teaching portfolios that document decision-making and classroom adaptations.
- Peer co-teaching sessions, allowing student-teachers to observe and critique diverse pedagogical styles.
- Community-based practicum projects, where pre-service teachers confront real-world diversity and ethical dilemmas under mentor supervision.

These practices align with NEP 2020’s vision of creating teachers who are adaptive, empathetic, and ethically grounded professionals. By demonstrating pedagogical intelligence in action through empathy, flexibility, ethical reasoning, and reflective decision-making teacher educators ensure that pre-service teachers not only learn about pedagogy but live it.

Teacher educators serve as the embodied curriculum of PI: their modelling and mentoring convert theory into lived practice. This repeated cycle where observing, reflecting, and doing continuously reinforce one another cultivates teacher quality rooted in awareness, adaptability, and ethical purpose, thereby actualizing the transformative aspirations of ITEP and NEP 2020.

## **To identify essential components of PI that contribute to adaptive, reflective, and ethical teaching practice.**

Pedagogical Intelligence (PI) integrates cognitive, emotional, and ethical capacities into a unified professional disposition that enables teachers to act adaptively, reflectively, and responsibly in complex classroom situations. The core components situational awareness, empathetic awareness, cognitive flexibility, and reflective intuition together form the operational base of PI, each contributing distinctly to adaptive and ethical teaching practice.

## 1. Situational Awareness

Situational awareness refers to the teacher's capacity to perceive, interpret, and act upon classroom cues such as student engagement, behavioural shifts, and learning barriers. This element resonates with Sternberg's (1985) concept of practical intelligence knowing what to do, when to do it, and how best to respond in specific contexts. Teachers with strong situational awareness continuously assess classroom dynamics and adapt instruction accordingly. For example, when a teacher observes that advanced learners have already grasped a concept while others are still struggling, they may divide the class into flexible groups assigning enrichment tasks to advanced students while re-teaching the core concept using visual aids for those who need reinforcement. Such responsiveness aligns with NEP 2020's vision of contextually grounded pedagogy and prepares teachers to meet the diverse needs of Indian classrooms characterized by linguistic and cultural plurality.

## 2. Empathetic Awareness

Empathetic awareness represents the emotional core of pedagogical intelligence. Rooted in Gardner's (1983) interpersonal and intrapersonal intelligences, it involves understanding learners' emotions, motivations, and perspectives while managing one's own affective responses. As Paniş (2023) emphasizes, empathy and moral dialogue are central to ethical pedagogical intelligence, allowing educators to foster a nurturing environment built on trust and care. For instance, acknowledging the emotional stress of first-generation learners or adapting expectations for neurodiverse students demonstrates empathetic awareness in practice. Teacher educators can model this capacity within ITEP by using reflective dialogues, role-play, and case-based discussion around inclusive education.

## 3. Cognitive Flexibility

Cognitive flexibility involves the ability to shift pedagogical strategies and thought processes in response to evolving instructional challenges. It connects with Rubin's (1989) notion of adaptive instructional judgment and Gardner's (2022) assertion that teaching requires distinct cognitive organization beyond only subject expertise. Cognitively flexible teachers integrate multiple pedagogical approaches traditional, experiential, digital, or inquiry-based depending on learners' readiness and feedback. Within ITEP, cognitive flexibility can be cultivated through microteaching, peer observation, and interdisciplinary curriculum modules, helping pre-service teachers build the agility to handle real classroom unpredictability.

## 4. Reflective Intuition

Reflective intuition, as described by Schön (1983) and extended by Rubin (1989), combines professional experience with instinctive awareness. It enables teachers to act wisely in the moment while maintaining moral and pedagogical integrity. For example, during a history lesson, when students appear disengaged, the teacher instantly shifts from lecture to a role-play debate on the freedom movement, brightening curiosity and participation. In the ITEP model, reflective intuition can be nurtured through mentored practicum reflections, teaching portfolios, and feedback analysis sessions.

## FINDINGS

The conceptual exploration reveals that Pedagogical Intelligence (PI) serves as a crucial theoretical and practical bridge between teacher education policy and classroom reality. The analysis identifies four core components situational awareness, empathetic awareness, cognitive flexibility, and reflective intuition as the operational foundations of PI that collectively nurture adaptive, reflective, and ethical teaching practice.

The study finds that embedding PI within the Integrated Teacher Education Programme (ITEP), as outlined in NEP 2020, significantly enhances teacher quality and professional judgment. It promotes a paradigm shift from content-focused preparation to intelligence-based professionalism, wherein teachers learn to diagnose learning situations, interpret socio-emotional cues, and make ethically grounded pedagogical decisions. Teacher educators

emerge as pivotal agents who model and mentor PI through reflective practice, dialogic mentoring, and value-oriented field experiences.

The integration of PI fosters contextual responsiveness empowering teachers to adapt instruction for diverse linguistic, cultural, and socio-economic settings in India. It also strengthens ethical discernment, enabling teachers to act with empathy, fairness, and social responsibility. PI not only complements NEP 2020's emphasis on holistic teacher preparation but also operationalizes its vision of producing professionals who are cognitively sharp, emotionally intelligent, and morally grounded.

## CONCLUSION

The study concludes that Pedagogical Intelligence represents the missing cognitive-ethical dimension in teacher preparation. Its integration within ITEP transforms pre-service education into a process of developing wise, responsive, and ethical practitioners, rather than only competent instructors. By embedding PI's multidimensional components into curriculum design, practicum experiences, and mentorship models, teacher education can cultivate educators capable of instant reflection, adaptive expertise, and principled decision-making.

Embedding PI into ITEP actualizes the transformative aspirations of NEP 2020 creating teachers who think critically, act compassionately, and teach responsibly. Such teachers become not only facilitators of learning but also ethical leaders and reflective nation-builders, contributing to the broader goal of humanizing education in contemporary India.

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