Cogent Education

ISSN: 2331-186X (Online) Journal homepage: www.tandfonline.com/journals/oaed20

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To cite this article: Paromita Roy, Anyesha Mishra & Devasena Desai (2026) Aligning educational and learning capitals for gifted and talented students in the Indian context: a collaborative autoethnographic study, Cogent Education, 13:1, 2680343, DOI: 10.1080/2331186X.2026.2680343

To link to this article: https://doi.org/10.1080/2331186X.2026.2680343

COGENT EDUCATION
2026, VOL. 13, NO. 1, 2680343
https://doi.org/10.1080/2331186X.2026.2680343

INCLUSIVE & SPECIAL EDUCATION | RESEARCH ARTICLE

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Aligning educational and learning capitals for gifted and talented students in the Indian context: a collaborative autoethnographic study

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ABSTRACT

Gifted education in India is shaped by the interplay of cultural traditions, socio-economic conditions, and institutional frameworks. This article examines that landscape through the Educational and Learning Capital Model (ELCM) and indigenous frameworks and proposes an Ecosystem Model of Giftedness Development reflecting Indian parallels from the findings. Using collaborative autoethnography and document analysis, the study explores how five educational capitals and five learning capitals are shaped in Indian contexts. Findings reveal strong reservoirs of cultural, social and didactic capital, rooted in family expectations, community networks and mentoring traditions, alongside fragile economic and infrastructural supports that limit access for many high-potential learners, particularly girls, rural youth and students outside English-medium systems. Telic and attentional capitals emerge as especially vulnerable to examination pressures, digital distraction and mental health concerns, yet can be strengthened through *Panchakosha*, based nurturing camps and yoga practices and *guru-shishya* style mentoring. With this backdrop, recent policy reforms, notably the National Education Policy 2020 (Ministry of Education, 2020), advocate for differentiated curricula, teacher training, and equitable access within an ELCM-informed, culturally grounded framework. Harnessing India's indigenous traditions alongside contemporary pedagogical approaches can better support gifted learners to realize their potential and contribute creatively, ethically, and meaningfully to society.

ARTICLE HISTORY
Received 9 December 2025
Revised 21 May 2026
Accepted 22 May 2026

KEYWORDS
Gifted education; ELCM; *Panchakosha*; *guru shishya parampara*; Ecosystem model of giftedness development; NEP 2020

SUBJECTS
Social Sciences; Behavioral Sciences; Work & Organizational Psychology; Leadership; Social Sciences; Education; Higher Education; Social Sciences; Politics & International Relations; International Political Economy; Globalization

In India, gifted education has gained urgency amid reform, commitments to equity and excellence, and policy interest in differentiated learning under the National Education Policy 2020 (NEP 2020; Ministry of Education, 2020). Yet it remains unevenly defined, inconsistently implemented, and underexamined as a culturally situated phenomenon. However, formal provision in India remains fragmented and often privileges urban, English-medium, and economically advantaged learners, leaving high-potential students underserved (Roy, 2017). Understanding the importance of gifted education in shaping trajectories of gifted students globally becomes highly relevant as talent development depends on individual ability as well as ecosystems around the individual and values that determine which forms of excellence are recognized (Ziegler et al., 2017; Ziegler & Baker, 2013). This understanding can bring clarity for students about conditions that enable access to advanced learning opportunities, mentorship, and psychosocial support as well as help schools identify how curriculum, teacher preparation, and institutional structures may foster more equitable provisions.

Giftedness has been conceptualized through a wide range of frameworks, including psychometric, developmental, cognitive, sociocultural, and systems-oriented perspectives. Early work often emphasized stable, measurable individual ability through psychometric classification (Hollingworth, 1942;

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Supplemental data for this article can be accessed online at https://doi.org/10.1080/2331186X.2026.2680343.

Terman, 1925). Later models expanded the field by foregrounding creativity, multidimensionality, and contextual influence, including Renzulli's (1988) three-ring conception, Gardner's (1983) theory of multiple intelligences, Sternberg's (1988) triarchic theory, Csikszentmihalyi's (1996) systems view of creativity, and Bronfenbrenner's (1977) ecological perspective. Together, these perspectives helped move the field away from a narrow trait view of giftedness and toward richer understandings of development, performance, and context.

Within this broader shift, systems-oriented approaches are especially relevant for contexts in which talent development depends heavily on the interaction between learners and uneven educational environments. The Actiotope Model of Giftedness (AMG) advances this move by conceptualizing gifted development as an adaptive, dynamic process emerging through interactions between the person and environment (Ziegler, 2005; Ziegler et al., 2013; Ziegler & Phillipson, 2012). This orientation is especially useful in non-Western and culturally plural settings because it allows giftedness to be examined not only as an individual characteristic, but also as an outcome of historically and socially situated opportunities for learning.

In India, this contextual emphasis is particularly important. Gifted education is not simply a matter of identifying high-ability students. It is embedded within plural educational traditions, family expectations, differential access to schooling, and diverse cultural understandings of excellence. Sternberg et al. (2021) views align with the Indian ethos of gifted where transformational giftedness has been practiced and followed rather than transactional giftedness through the practice of intellectual humility over performance exhibition. Indian families, communities across India still adhere to the practice of intellectual humility over performance exhibition. In India, the discourse on gifted education is emerging, despite grappling with a burgeoning population and related economic issues. Yet it continues to draw on long-standing philosophical traditions that view learning as a holistic pursuit. Ancient Indian educational ideals emphasized not only utilitarian skills but also the pursuit of wisdom (*jnana*), discernment (*prajna*), and liberation (*moksha*) (Bhat & Javaid, 2024). The *guru-shishya parampara* (teacher-disciple tradition) integrated moral and spiritual development with intellectual training, reflecting an indigenous emphasis on the inseparability of personal growth and knowledge (Raina, 2002). These perspectives align with contemporary systemic approaches that highlight the interaction between individual potential and educational ecosystems.

Another indigenous model relevant to gifted education is the *Panchakosha* framework (Raina, 2016), which conceptualizes the human being as composed of five sheaths: *Annamaya* (physical body), *Pranamaya* (vital energy), *Manomaya* (mind and emotions), *Vijnanamaya* (intellect and wisdom), and *Anandamaya* (bliss or spiritual consciousness). Traditional *gurukul* education sought balanced growth across these dimensions through embodied discipline, mental cultivation, intellectual refinement, and spiritual nurturing. Today, Indian educators are rediscovering *Panchakosha* as a culturally meaningful framework for nurturing giftedness. The Kaveri Gifted Nurturing Model applies *Panchakosha* to support cognitive, socio-emotional, and ethical development (Desai & Manasawala, 2023), and teacher training in this model has improved educators' understanding of and provision for gifted learners (Lobo et al., 2016). Such approaches reflect the view that intellect alone, without character, well-being, and self-awareness, yields incomplete development. Unlike the West, India has no single pan-Indian label for high-ability children. Terms such as *buddhimaan* and *pratibha* convey not only intellect or talent but also wisdom, discernment, and moral purpose. Thus, contemporary uses of '*Buddhimaan* children' retain indigenous meanings beyond IQ (Desai et al., 2024).

Gifted education in India operates within persistent inequalities of caste, class, gender, and region. Formal policies remain sparse, and existing programs often privilege urban, English-medium, and economically advantaged learners (Roy, 2017). These tensions make India an important site for examining how culture, resources, and inequality shape gifted education. However, India, with the largest population of youth in the world is poised towards offering global knowledge in the field of gifted education, as well as to its own gifted youth. It also offers globally relevant insight into culturally responsive, context-sensitive approaches to talent development today.

In this study, we employ collaborative autoethnography and document analysis to understand how educational and learning capitals (Ziegler et al., 2017; Ziegler & Baker, 2013) interact with indigenous frameworks like *Panchakosha* and *guru-shishya parampara* to enable or constrain talent development.

This approach addresses the outlined challenges by illuminating practitioner-driven insights for policy, curriculum, and teacher preparation, encouraging context-specific reforms aligned with India's NEP 2020 (Ministry of Education, 2020). The study responds to the challenges outlined above by shifting attention from giftedness as an individual attribute to gifted development as a culturally relevant, resource-dependent, and institutionally enabled process.

Theoretical framework

This study is framed within the Actiotope Model of Giftedness (AMG) and its elaboration in the Educational and Learning Capital Model (ELCM; Ziegler & Baker, 2013; Vladut et al., 2015; Ziegler et al., 2017; Ziegler & Stoeger, 2019). AMG conceptualizes giftedness not as a fixed trait but as a property of a dynamically evolving person-environment system (the actiotope), in which learners and contexts co-construct developmental trajectories. ELCM operationalizes this systemic view by distinguishing exogenous educational capital (cultural, economic, social, infrastructural, and didactic resources) from endogenous learning capital (organismic, actional, telic, episodic, and attentional resources) available to the learner. These frameworks are well aligned with the contemporary Indian context, capturing both the existing strengths of gifted education and the areas in which provision remains limited. In a nation as large and diverse as India, educational policy requires sustained planning, adaptation, and long-term implementation before its effects become visible. Against this backdrop, the ten educational and learning capitals provide a useful analytic lens for examining and reporting the multiple dimensions of gifted education in India. Moreover, our research questions are concerned not simply with identifying giftedness, but with understanding how gifted education is enabled, constrained, and interpreted across diverse socio-cultural and economic contexts.

The ELCM framework assumes circular causality (Ziegler & Stoeger, 2019), where, educational capitals shape opportunities for action and experience, which in turn transforms learning capitals. Modifying how learners use and seek educational resources in turn feeds into educational capitals that need to be developed. Over time, this recursive process sustains or constrains talent development. In the present study, the ELCM functions as a sensitizing lens for interpreting educator-scholars' narratives, allowing us to map how specific Indian configurations of family, schooling, policy, and culture enable or inhibit different capitals. At the same time, the framework is deliberately brought into dialogue with indigenous Indian perspectives (e.g. *Panchakosha*, *guru-shishya parampara*). This helps us to critically examine the cultural fit and potential extension of ELCM in the Indian gifted education ecosystem.

Research purpose and questions

The study examined how experienced Indian educator-scholars understand, negotiate, and enact the ten forms of educational and learning capitals in their everyday work with gifted learners. A further aim was to explore how these capitals are configured and constrained within the gifted educational system in India. Accordingly, the study was guided by the following questions:

1. How do the participating educator-scholars experience and interpret the ten forms of educational capital and learning capital within the gifted-education ecosystem in India?
2. In what ways do indigenous Indian frameworks converge with, challenge or extend the Educational and Learning Capital Model when used to interpret giftedness and talent development in India?

These questions position the study as a theoretically informed and empirically grounded inquiry into how gifted education is experienced, contested, and reworked by practitioners operating within India's specific cultural, pedagogical, and infrastructural conditions, rather than as an attempt to generalize across all Indian contexts.

Methodology

Research design

This study followed the constructivist-interpretivist paradigm, which assumes that reality is socially constructed and that knowledge emerges through subjective interpretation and meaning-making (Creswell & Poth, 2016; Denzin & Lincoln, 2011). From this perspective, human experience and context are inseparable, and inquiry becomes a process of interpreting lived experiences through broader cultural, historical, and institutional forces. The study, therefore, gives importance to voice, reflexivity, and relational knowing of the researchers both as narrators and interpreters of meaning (Holman Jones et al., 2013).

Drawing from this epistemological stance, the dual approach of Collaborative Autoethnography (CAE) framework (Chang et al., 2016) and document analysis (Bowen, 2009) was adopted as the research design. The aim was to capture the dialectical relationship between lived experience (experiential depth) and documented discourse (contextual breadth) within the field of gifted education in India. CAE involves a process of co-constructed reflection, where researcher-participants engage in constructing meaning through interaction and conversation, rather than in isolation (dialogic meaning-making) to bring out shared social and cultural experiences (Chang et al., 2016; Ngunjiri et al., 2010).

In this study, the researchers did not treat their experiences as isolated anecdotes but as events and experiences embedded in India's sociocultural and educational structures. According to Denzin (2013), the multiplicity of CAE's interpretive process adheres to the notion of a single life, holding multiple narratives, each offering a distinct version of self and experience. To situate these narratives within a broader context, document analysis (Bowen, 2009; Morgan, 2022) was incorporated as a complementary methodological strand. To authenticate CAE reflections historically as well as alignment with policy and institutional context, the authors used relevant policy documents, institutional materials, organizational websites, and scholarly sources related to gifted education and talent development in India (see Appendix A). Thus, by combining CAE and document analysis the study sought to *story* (Holman Jones et al., 2013) gifted education in India through the process of storytelling. The experiences of educators/scholars are made visible to help readers understand how gifted education in India is negotiated and reimagined in their professional worlds through the interplay of educational and learning capitals (Ziegler & Baker, 2013). This methodological choice acknowledges that the phenomena under study cannot be disconnected from the researchers' own positionalities, contexts, and reflections.

Participants/researchers and positionality

Following CAE's epistemological foundations, the researchers acted as both participants and co-constructors of meaning. With all authors from psychology and gifted education backgrounds, each author brought distinct professional trajectories, cultural and domain orientations, and perspectives. These reflected in the way they understood, narrated and theorized gifted education in India. Their diverse professional and cultural experiences generated multiple perspectives that led to a deeper, more nuanced understanding, allowing the study to move beyond individual accounts toward a collective understanding of Indian gifted education.

Author P (Paromita Roy, Ph.D.)

Author P retired as Deputy Director from Jagadis Bose National Science Talent Search, Kolkata, India. With more than three decades of working with gifted students in STEM, her academic and professional work focuses on talent identification and nurture of talented students in STEM, psychological well-being, program development, curriculum design, teacher education, and policy advocacy. Drawing upon her extensive engagement with STEM students, teachers and mentors and research in India, her narrative situates gifted education within everyday institutional realities, where policy aspirations often intersect with cultural expectations and resource limitations. Through her reflections, P highlights social, cultural, affective, and moral dimensions of working within the Indian education system. She shows how educators and stakeholders balance care, personal convictions, responsibility, frustration, hope, and moral tension in the face of resource constraints, policy pressures, bureaucracy, and embedded hierarchies.

Author A (Anyesha Mishra, Ph.D.)

Author A served as critical friend (Costa & Kallick, 1993) and analyst, engaging reflexively with the coauthors' narratives to synthesize meanings, interrogate assumptions, and situate experiences within broader theoretical and cultural frameworks. Born and raised in eastern India, she pursued her higher education and professional training in the western part of the country, where her early career in gifted education began. After several years of working in the field, she earned her doctorate in gifted education administration in the USA, which provided her with a comparative and cross-cultural lens for analyzing educational systems. Having experienced both Indian and U.S. contexts, A brought a global yet local perspective to the collaborative process, examining how international theories of giftedness intersect with indigenous educational realities. She currently leads an educational technology startup focused on the psychosocial development of school-going students, extending her scholarly work into applied innovation and practice.

Author D (Devasena Desai, Ph.D.)

Author D is the Associate Director for Kaveri Counseling, Empowerment and Gifted Centre involved with inclusive education in schools with a special focus on training teachers, counseling, and research serving the needs of the gifted for over 2 decades. She comes with a multicultural perspective having been raised in south and now living in western India. She has traveled both within and outside the country building connections with colleagues who have enabled in shifting the paradigm in India. In this article, D brings a nuanced understanding of the socio-emotional and pedagogical using Indian knowledge systems to understand the needs of gifted learners. Through her lens, gifted education in India emerges as a space of negotiation, between cultural norms, institutional inertia, and educators' aspirations to nurture potential in diverse learners.

Collective positionality

Together, the three women authors represent a collection of firsthand understanding of India's evolving field of gifted education. They approach the research empathetically, insightfully, reflectively and critically, making the collaborative process dialogic with personal experience, institutional knowledge, and theoretical interpretation converging to co-create meaning. While the authors recognize the inevitability of their professional authority and shared advocacy for gifted education shaping their interpretations, they acknowledge its strength in deepening the analysis with contextual sensitivity, authenticity, and theoretical detailing. The team's reflections resulted in transforming their individual narratives into collective meaning-making, with the narration of their professional journeys serving both as data and the lens through which the landscape of gifted education in India has been examined.

Data collection and analysis

Author P and D served as primary autoethnographic narrators. They produced written narratives in response to a structured set of reflection questions designed by A on the lines of Ziegler's ELCM (Ziegler et al., 2017; Ziegler & Baker, 2013) focusing on exogenous (educational) and endogenous (learning) resources influencing talent development in India (see Appendix B). Each prompt encouraged the narrators to write in first person, drawing upon professional histories, live anecdotes, commentary on systems, social and institutional hierarchies and stereotypes to explore how these 'capitals' manifested in their work with Indian gifted learners and institutions.

Authors collectively decided not treating these detailed narratives as isolated stories but as cultural descriptions representing India's educational ecosystem. Each author submitted her narrative to the collective research team for discussion and refinement through virtual meetings and written exchanges, that formed the collaborative component of the process. This enabled peer reflection, cross-validation, and interpretational dialogue (Chang et al., 2016; Ngunjiri et al., 2010).

Author A did not contribute to a personal narrative but served as a critical friend (Costa & Kallick, 1993) and analyst, participating in all phases of data generation and interpretation. She engaged reflexively with her coauthors' narratives, synthesizing meanings, questioning underlying assumptions, and contextualizing individual experiences within wider cultural and theoretical frameworks. This ensured

coherence between emergent experiential data and the goals of the study. To connect the personal narratives with a wider socio-educational context, document analysis involved a structured review of selected national policy documents, institutional and programmatic materials, and scholarly sources relevant to gifted education and talent development in India (see Appendix A). These documents contextualized and corroborated the evolution of Indian gifted education and/or remained silent in relation to the CAE narratives. Purposeful selection of already limited and non-empirical documents in the Indian context was carefully reviewed and integrated with the narratives. Documents were included when they were India-focused, publicly accessible or institutionally available to the authors, and relevant to one or more ELCM capitals or to the historical, policy, or programmatic development of gifted education in India. Documents were excluded when they were duplicative, inaccessible, not India-focused, or used only as general theoretical background rather than as contextual evidence. This was consistent with Bowen's (2009) view of document analysis as a process of finding, selecting, appraising, and synthesizing documentary data.

The final analysis involved deductive coding (Fife & Gossner, 2024) of the ten dimensions of Ziegler's ELCM (Ziegler et al., 2017; Ziegler & Baker, 2013) and connecting and interpreting autoethnographic narratives and the selected documents in that context Narrative and documentary data were first reviewed separately and then compared to identify convergence, divergence, or absence of documentary evidence for each capital. Once mapped within the ELCM framework, researchers then conducted a second round of inductive coding (Boyatzis, 1998). The purpose was to identify emergent themes that extended beyond Ziegler's categories, particularly those reflecting India's sociocultural scenario, thus focusing on aligning those cultural meanings, not key within the Western origins of the model (Fereday & Muir-Cochrane, 2006). Through collaborative dialogue and reflexive discussion on theory and context, the authors compared, challenged, and synthesized insights across their individual narratives. The resulting analysis thus maintained the conceptual integrity of the ELCM framework along with cultural distinctiveness of gifted education in India.

Ethical considerations and trustworthiness

Ethical rigor in this study was grounded in principles of relational ethics and reflexive accountability, both central to qualitative and autoethnographic inquiry (Adams et al., 2015; Ellis, 2007). All coauthors participated voluntarily and collaboratively, engaging in shared decisions around representation, interpretation and authorship to uphold procedural and relational integrity (Tracy, 2010, 2024). Reflexivity operated parallelly as an ethical stance and an analytic tool, enabling authors to examine issues of power, emotion, and positionality, inherent in collaborative meaning-making (Tullis & & others, 2013). Furthermore, confidentiality was preserved through use of pseudonyms and selective anonymization and careful contextual framing that balanced transparency with care. Finally, the study's credibility (Jenks, 2002) and trustworthiness (Lietz et al., 2006) were enhanced through sustained reflexivity, dialogic validation, theoretical transparency, and triangulation across narrative and documentary sources (Tracy, 2010). To support transparency, documentary evidence was treated as contextual, corroborative, or absent in relation to each ELCM capital, rather than assumed to confirm the authors' narratives solely.

Findings

Authors have organized findings according to the ten educational and learning capitals proposed in the ELCM (Ziegler et al., 2017; Ziegler & Baker, 2013). The analysis draws primarily on the authors' collaborative autoethnographic narratives and is contextualized through document analysis using selected policy, institutional, programmatic, and scholarly sources relevant to gifted education in India. Since documentary evidence was not equally available across all ten capitals (see Appendix A), each subsection identified documents that corroborated with the narratives, offered broader contextual support, and maintained documentary silence suggesting gaps. This integrated section reveals that gifted education in India is layered, culturally evolving, and shaped by uneven access to educational and learning resources through the CAE and document analysis.

Unequal economic engine for talent development (economic educational capital)

P emphasizes notions and values associated to giftedness that are spread across India's diverse economic (*arthik sansadhan*) and socio-cultural tapestry and its effect on Indian talent development: 'academically talented students almost always had access to supplementary learning materials', because families 'considered academic excellence a natural investment'. By contrast, peers gifted in the arts 'often faced acute financial constraints', captured in her shock when 'an exceptionally gifted artist … showed me a set of paintbrushes he had crafted from cat whiskers because his mother had refused him money for real ones'. In school, recognition itself was scarce, 'nearly six thousand students, only about twenty were identified as musically talented … and just two of them were girls'. One mother, for instance, 'would willingly part with her gold jewelry if it ever meant sustaining her daughter's musical education', a culturally relevant conversion of assets into economic educational capital. Looking back on university, P reflects that financially constrained peers 'largely remained invisible to me', then centers the 'in-between' middle class perspective: 'Gifted students from India's middle-income families face tensions between 'not enough' and 'too much' to become silent forces pushing them toward achievement'.

D, from a middle-class household, extends this picture by striving towards philanthropic activities through her association with Tribal Mensa Nurturing Program (TMNP) for identifying and nurturing rural students through 'regularly procuring individual sponsors to sustain several initiatives to support education and resources for gifted girls'. Support was reciprocal: 'the students were expected to work in lieu of their scholarship, making it a two-way support system and not charity'. Two underprivileged students were seen stepping out of India to present their research work on giftedness in a European conference, with individual sponsors and non-monetary help from other families 'so that the girls did not feel overwhelmed with their first trip abroad'. D shares how in early 2000, she carried large volumes of sponsored library books from the USA and Europe, 'the lack of economic capital did not prevent her from seeking support' which she donated to her institute, thus converting personal resources into institutional capital.

Document analysis confirms these experiences by showing that economic educational capital in India is distributed through a combination of family investment, scholarships, public programs, and institution-specific opportunities, while remaining profoundly uneven in terms of accessibility across class, geography, gender, and language. Perspectives on human-capital and talent argue that family and institutional investments support transformation of potential into performance (Ziegler & Baker, 2013). Cross-national evidence also links parental education/income with access, attainment, and opportunities (Blanden & Gregg, 2004; Tieben et al., 2010), with schooling which in turn affects per-capita growth (Self & Grabowski, 2004). In India, education functions as a household investment with access dependent on economic conditions that may permit or thwart their involvement in the vast 'shadow education' market (Bray, 2009**;** Kumar & Chowdhury, 2021). Urban concentration of laboratories, libraries, and cultural institutions, versus rural deficits in electricity, internet, and qualified teachers, further stratifies opportunity, with regional disparities increasing the gap (Drèze & Sen, 2013). Programs such as those by *Jawahar Navodaya Vidyalaya* (JNV), Jagadis Bose National Science Talent Search (JBNSTS), and National Talent Search Examinations (NTSE) offer important yet limited solutions to counter these gaps with participation remaining skewed toward urban students (Roy, 2017). In Bourdieu's (1986) terms, without systemic redress, educational fields reproduce advantage by rewarding those already rich in economic and cultural capital. Economic educational capital, through P and D's narratives are seen as both enabling and stratifying: it opens doors, sometimes creatively orchestrated by educators and institutions, while its absence leads to talent being less recognized, un-nurtured, and more likely to fade within a system where opportunity is intensely valued and unevenly available.

Rich cultural and value-based tapestry for talent development (cultural educational capital)

P's account opens with Rani, a 23-year-old dancer she met 'at a village music fair', whose life was carried by shared norms of care: 'older women in her village virtually adopted the two sisters … They did this because they believed that this was the natural thing to do', and they 'identified Rani's talent for dancing and supported her in whatever way they could', until she 'became the pride of the village'. Here, cultural belief and practice operated as embodied cultural capital *(sanskritik poonji)*, where dispositions,

valuations, and rituals were recognized and authorized as a pathway in the performing arts, even in the absence of formal schooling. In contrast, P's portrait of Shekhar shows how cultural stigma can suppress recognition: he grew up in a 'culturally impoverished environment', where 'the stigma attached to his family overshadowed his achievements', pushing him to leave town to sustain his sport. She then reflects on the formative power of her own environments: a military upbringing steeped in 'honor, valor, duty, dedication, and discipline' (dispositions she later wondered might not reflect traditional giftedness notions), followed by a university culture that was 'a bedrock of talent and excellence', where 'not a day went by without celebrating or showcasing' student work. She recalls that gifted education as a field was largely missing from the curriculum, 'no mention … in the 1980s', save for 'a professor … with two books … Van Tassel-Baska … Reis and Renzulli', a fleeting glimpse of institutionalized cultural capital in an otherwise absent domain. Across decades of work with high-ability youth, P describes a shift in cultural beliefs: although 'Indian society … appreciates talent in every form', many still hold that gifts should serve family and society, 'talent … is 'God's gift'', and that gifted education ranks low on the priority list. One mother's protest crystallizes this expectation: 'Of what use is his talent if he cannot help his brother and sister? How can he be so selfish?'

D's narrative tracks how caste, gender, and language affect cultural advantage. She notes the tension between a father who insisted that 'girls should have at least a master's degree' and a mother who prioritized early marriage, a normal practice in India. In the 1990s, she perceived giftedness as 'an elite commodity', 'especially … among boys', and 'upper caste (highest in the caste pyramid in India) who were more privileged with access to higher education, resources and career-oriented connections', accumulated across generations. D mentions an incident explaining how cultural disparities affect young girls pursuing their academic journeys. After 2 years of sponsored admission into a college, the student suffered a deep sense of isolation because of the way she dressed and spoke, unlike her classmates, making her drop out of college and forego the dream for higher education. Through this narrative, she communicates that cultural capital in various forms does not always align with telic and economic capital.

Being married to N, a Mensan, D's beliefs went through transformative changes, and she found herself 'zooming into the struggles that gifted children faced due to their disadvantaged backgrounds'. As she followed trends, she talks about recent cultural turns, mentioning '2020-2025 bringing in a sea of change with India's National Education Policy 2020 legitimizing indigenous frames: this gave us … courage'. D and her team at Kaveri gifted center, working with '30 girl prodigies in performing arts', following the *guru-shiṣhya* tradition 'addressed their socioemotional issues', a move she sees as 'trend setter in the Indian talent community'.

Document analysis partially substantiated these narrative accounts. Policy and institutional sources were seen to increasingly recognize holistic education in India, where, knowledge systems, arts, multilingualism, and value-based learning were considered legitimate educational resources, particularly in the context of NEP 2020 (Ministry of Education, 2020). However, these documents rarely frame such cultural resources explicitly as gifted-education provisions suggesting that despite India possessing rich cultural educational capital, this capital remains unevenly translated into formal gifted-education policy and practice. The narratives when read alongside document analysis, resemble Bourdieu's (1986) forms of cultural capital, embodied (dispositions like duty, multilingualism), objectified (books, instruments), and institutionalized (credentials, program labels), and to linguistic capital in which the ability to speak and read in English bestows prestige and power (Annamalai, 2006; Bourdieu, 1991). They also mirror India's uneven spaces like urban culturally rich, opportunity enabling environments and rural spaces where locally valued capital (e.g. folk arts, community caregiving) are often unrecognized by formal systems (Balagopalan, 2008; Kumar & Gupta, 2008). Caste and gender affect social and educational access, with privileged groups historically closer to world literature, arts, and scientific discourse (Deshpande, 2011), while girls' mobility and participation remain differentially constrained (Bandyopadhyay & Subrahmanian, 2008; Nambissan, 2010). Within this situation, indigenous reservoirs like classical music and dance, *Ayurveda*, *Vedic* mathematics, and holistic frames like *Panchakosha* constitute strong alternative cultural capital that is locally meaningful yet unevenly institutionalized (Joshi, 2011; Puri, 2025; Raina, 2016). Language, caste, and geography continue to filter who is seen as gifted, thus making cultural educational capital a sieve through which gifts are named, nurtured, or underserved.

Enriched social model for serving gifted students (social educational capital)

P frames social capital as everyday reciprocity and care that 'guards us against isolation and neglect'. Her account of Meera's development shows dependence on networks that compensated for poverty: her home 'resonated with music, poetry, and storytelling', and a 'network of local artists and teachers … recognized her potential', enabling progress despite limited funds. P's own trajectory underscores how, dense peer ecosystems can accelerate learning: in a vibrant university culture where, at one point she was 'involved with several groups of talented peers at a time', an immersion that forged collaborative dispositions and confidence. Early in her career, however, she recalls a thin professional network: 'islands unto ourselves' until international and national convenings (e.g. the 2014, Gifted Minds conference) seeded durable ties, mentorships, and reciprocal exchange that 'put India on the international map of Gifted Education'.

D's narrative makes the mechanisms of social educational capital explicit by naming networks, mentors, and enduring ties. For example, to her, *Jnana Prabodhini* opened 'the world of giftedness', while Mensa and TMNP built longitudinal relations with adolescents which was close to the modern *guru-shishya* relationship: 'gifted children were a regular part of our lives, they continued to participate as family in all our festival celebrations, overnight stays, movies, food and discussion evenings',. Her account clearly demonstrates how the *guru-shishya parampara* is maintained even in modern times. She also built trans local and international associations to build local (Jagadis Bose National Science Talent Search and Agastya Foundation in India) and international (European Talent Search Network and Center for Talented Youth, Ireland) networks. Her association with Kaveri Gifted and Education and Research Centre (KGERC) and Jnana Prabodhini Institute of Psychology (JPIP) continues to build networks to the National Ministry level.

Document review supports this finding most emphatically at the level of institutional networks rather than individual relationships. Programmatic and institutional sources identify organizations, schools, centers, and nongovernmental initiatives that contribute to giftedness identification, enrichment, mentoring, and teacher development. Yet these documents tend to describe services or institutional roles rather than referring them through the lens of sustained mentoring, trust, and long-term commitment. The CAE narratives thus added depth to the documentary record by showing how social educational capital is supported through care, advocacy, professional reciprocity, and selective gatekeeping.

D also records resistance, not for the reason of lacking social capital but rather, for the presence of social and academic one upmanship in the professional field. This led to a situation which lasted for almost 2 years when a senior Indian educator 'denied and delayed collaboration and knowledge sharing' illustrating how bureaucratic and academic gatekeeping can delay progress and stagnate growth at every level. Counterbalancing this, D narrates collaboration with a local school that trained 'their best 22 teachers', catalyzing shared research and implementation. Finally, the ability to speak multiple languages becomes an enhanced social capital in India that translates into varied conversations and multiple networks based on mutual trust.

These narratives exemplify social capital (*samajik sahakarya*) as resources embedded in and mobilized through relationships that are familial, peer, professional, and transnational (Bourdieu, 1986). In gifted development, such ties transmit expectations, information, and opportunities, where intergenerational closure within families strengthen norms and academic support (Coleman, 1988), while teachers and mentors act as scaffolding agents recognizing potential and brokering enrichment (Subotnik et al., 2011). Peer ecologies, like P's campus groups or D's Indian Institute of Technology (IIT) school cohorts, foster motivation, collaboration, and sustained engagement (Azmitia & Cooper, 2001), now amplified by online networks which extend problem-solving and mentorship across the globe (Ito et al., 2013). Indian joint-family structures have been seen to expand an individual child's network of adult advocates and support systems, though the same intensity can lead into pressure due to 'helicopter parenting'. High stakes in shadow education cultures, caste and rural-urban inequalities also affect those who benefit from such networks (Sriprakash et al., 2016).

From the Actiotope Model's perspective, these are facets of social educational capital that include social scaffolding, commitment, and competence-building through mentors, tutors, and program experts (Ziegler et al., 2017). Together, P's and D's accounts show that social capital not only buffers economic

scarcity, but actively aids gifted development: adopting a dancer, sustaining adolescent cohorts as 'extended family', mediating access to curricula and conferences, and even confronting gatekeepers who control the access to opportunity.

Uneven material and human resource for gifted students (infrastructural educational capital)

P shows how infrastructural educational capital (*saikshik avasanrachna)* provides the support that makes giftedness possible and visible. Entering JBNSTS in the early 1990s, she recalls it as 'the only institute in India that identified talented high school science students and undergraduates', with enrichment modeled on Westinghouse/Regeneron (Roy & Mishra, 2021), while the national scheme 'provided only scholarship support'. Yet, her first walk through the institute library was telling: 'I was greeted with bookshelves full of science and technology books … [but] looking through the tall bookshelves …. couldn't find any books or journals on Psychology, Education, and certainly not gifted education'. Directed to a dilapidated cupboard she later called 'my treasure box', she found 'three books (Bloom, Terman, Guilford), nine issues of Gifted Child Quarterly … and a set of TAT cards', many 'unread'. In those stacks, 'Science was gendered': 'more than 50 biographical books on scientists' but only two on women (Franklin, Curie). For P, the realization that uneven infrastructures privilege some disciplines, histories, and identities, and the absence of human and material resources 'can be a devastating blow', especially in STEM where 'experimentation, hands-on experiences, field studies, and advanced curriculum' are essential. The contrast across India is stark in her memory, 'long streams of children … with worn-out footwear' walking miles to under-resourced rural schools versus urban grids of buses and carpools, so that urban and rural students 'are like apples and oranges … incomparable and unmatchable'. Even with expanding initiatives, she concludes, 'the number of such programs and their depth of coverage fall gravely short of the minimum requirement'.

D's account tracks how infrastructures are negotiated in policy and practice. She describes Jnana Prabodhini as 'the only one in the country … catering to the gifted since 1962', yet requiring seeking government permission to serve homogeneous groups of gifted students 'each year'. The situation emerges from the notion that gifted education is elitist, less important in the face of poverty, mass education, and education for children with special needs. Thus, adoption of gifted programs in India remains cosmetic and, thus, give the impression of being fashionable, without the effort to make core changes in implementing such programs.

At the micro level, D names specific infrastructural gaps such as in school libraries 'we don't even allow students from rural or semi urban schools the freedom to access internet or smart boards, only teachers are permitted'', 'an advanced Makers' lab in a school served only their own students who were already privileged, but did not extend this facility to students of nearby schools'. Her dilemma extends to the disconnect she sees between overburdened teachers and elite institution researchers in collaborative engagement towards teaching and mentoring gifted students.

These narratives map the construct precisely. In Ziegler's framework, infrastructural capital comprises physical and institutional resources alongside human expertise that stimulate and enable talent development (Ziegler et al., 2017; Ziegler & Baker, 2013). Classic talent-development models assume such scaffolding with enriched curricula and structured opportunities (Renzulli, 1977), environmental catalysts and mentors (Gagné, 1995), multi-level ecological supports (Bronfenbrenner, 1994), and mediated learning through tools and collaboration (Vygotsky, 1978) while contemporary mega-models emphasize staged resourcing across trajectories (Subotnik et al., 2011).

Historically, India built recognizable pillars like Jagadis Bose National Science Talent Search (1958), Jnana Prabodhini Prashala (1962), National Science Talent Search (1964), *Jawahar Navodaya Vidyalayas* (1986) and, more recently Kaveri Gifted Education and Research Center (2014), Atal Tinkering Lab, mobile science labs (Agastya Foundation), have expanded the hardware of opportunities. Yet infrastructures remain geographically stratified with urban private schools possessing laboratories, libraries, auditoria, and digital classrooms, while many rural government schools lack basics such as electricity, water, adequate space; and road connectivity, restricting enrollment and retention. Though post-covid saw digitization drives across some rural schools, science labs remained underdeveloped (Kingdon, 2020) with the pandemic further crystallizing the urban rural divide with enlarged access for only those with

devices and bandwidth, while others 'dropped out' as digital infrastructures faltered (Dhawan, 2020; Kundu, 2020).

Across this landscape, P's 'treasure box' and D's 'advanced Makers' lab' symbolize opposite ends of the same system: the former, a scarcity that felt unsurmountable; the latter, an abundance restricted by fees, policies, and norms. Where infrastructures are present and accessible, gifted journeys are seen to accelerate; where they are limited, giftedness becomes harder to identify, cultivate, and retain, especially for girls and rural learners whom both authors see systematically deprioritized. Infrastructural educational capital, then, is not a neutral backdrop but the very medium through which India decides which kinds of potential get named, nurtured, and sustained. Documentary records thus supported authors' accounts of infrastructural unevenness, with narratives illustrating how such unevenness is experienced in everyday educational practice.

Dialogical guru–shishya pedagogies and sustained mentorship (didactic educational capital)

Didactic educational capital (*shikshan margdarshan)* in India according to P, is a mutually dialogical cycle of teaching and learning, which has 'historical roots in the *guru-shishya* tradition', uniting transmission of domain knowledge with ethical reflection and practice (Ministry of Education, 1948). She invokes the *Bhagwad Gita*'s chariot scene, where Krishna is seen guiding Arjuna through '*dharma* (righteous living), *karma* (action following the principle of cause and effect), *jnana* (knowledge and wisdom) and *bhakti* (devotion)', as a metaphor for transformative didacticism, where the teacher leads by inquiry and not authority. In contemporary classrooms, this dialogic ethos reappears in unlikely places. Vibha, a ninth grader from a remote village with 'a passion for stargazing', could not access the 'language of science' because 'she had never studied English'. Her teacher, Ms. T, 'seated [Vibha] behind [her] bicycle … three times a week' over 'rickety village roads', building a deep mentoring relationship within three years. Other observations show the challenges of teaching: in a class of fifty tenth-grade girls, three formerly 'notorious for disrupting their class' 'sobered up' after an NGO gave them intellectually challenging work; a rural teacher, Mr. K, saw 'hands shooting up with insights' when he taught longitude and latitude through 'interdisciplinary storytelling and role play', but administrators insisted he should 'teach' and not 'tell stories'. P's main argument is clear: where pedagogy is deep, dialogical, and experiential, gifted learners 'light up'; where instruction collapses into recitation, high-potential students disengage. The absence of sustained mentorship can also extinguish trajectories: Sheela, a musically gifted peer, 'slackened' when she could not find 'a strong and long-term *guru*', later 'losing' her formative mentor to advanced Alzheimer's, an intimate portrait of what disappears when didactic ties weaken.

D translates these principles into classroom practices. Most effective, in her view, is 'introducing students to technology, AI, digital presentations, videos, mime' alongside cross-regional virtual coaching and teacher learning communities. The teachers who 'truly love teaching and have a broad educational background … connect incredibly well with gifted students', and when given 'specific training in gifted education', their guidance 'grows a notch stronger'. Least effective are scripts that silence curiosity, 'I know more and you just listen', or taunts like 'don't be such a show-off' and compliance-driven trainings that become 'just another task'. She points to school-based experiments that briefly institutionalize didactic capital: Innovatia, an annual grade 1–4 competition that 'encourage[s] curiosity and inquiry in science'; an individualized education program, for Raghav, an eighth grader who was taught advanced mathematics during other subject periods in Kaveri school and was later invited to design questions and co-conduct Mathemania, a math interschool competition, yielding 'ownership and joy'. D however names a systemic pattern: differentiated maths sessions in two Grade 6 classrooms 'clearly demonstrated' that high-challenge content engaged only those ready for it, while others disengaged, yet 'each such exploration' was 'mostly a one time' trial, 'not viable for sustained learning', and even after 'advanced training' teachers' motivations were not tracked', suggesting gaps in didactic infrastructures. These experiments gave rise to bridging the gaps in current pedagogies.

P & D's narratives on didactic capital portray the need for expertise in designing and improving educational and learning processes (Ziegler et al., 2017; Ziegler & Baker, 2013) in India. Teachers' knowledge on selection and identification of gifted students, differentiated curricula, advanced material, and one-on-one mentorship will prove a strong alignment with gifted education models such as those by

Renzulli (emphasizing creativity and task commitment), Gardner (multiple intelligences), Gagné (environmental catalysts transforming gifts into talents) and Tannenbaum (attention to non-intellective factors like persistence and motivation). India's *guru-shishya* lineage already provides a culturally rich template for high-challenge, intense mentoring across arts and is now returning in STEM education (Roy & Mishra, 2021), while simultaneously facing constraints of large classroom, skewed student-teacher ratios, exam-centric curricula, and limited pre- and in-service exposure to gifted pedagogy (Puri, 2025). The National Education Policy 2020, while placing gifted learners on the policy agenda and urging supplementary enrichment material, guidance, and engagement for them, remains at an aspirational level and falling short of an operational roadmap.

Though the presence of didactic aspirations was confirmed through document analysis of policy, CAE narratives revealed implementation gaps between plan and sustained practice. Additionally, teacher beliefs and biases cut across caste, gender, and language to shape recognition and opportunity (Nambissan, 2010). Against this backdrop, P's bicycle lessons, D's Innovatia and IEP case, and the reclamation of dialogic, interdisciplinary teaching together show that didactic capital can be strengthened through environments that encourage questioning, protect depth over breath, consistent mentoring, in a culturally and globally grounded environment (Roy & Mishra, 2021).

Cultivating experiential ethos through opportunity structures (actional learning capital)

P understands actional learning capital (*Kaushalya va kriya*) as the capacity to translate knowledge into actions and connects *karma yoga* and the *guru-shishya* ethos to Gandhi's epic book, *Nai Talim* and Tagore's experiential humanism. To her, gifted trajectories depend on 'the ways students act on their knowledge', which are 'in reality, the result of economic, social, cultural, didactic, and infrastructural factors shaping action'. Her narration shows how repertoires expand (or stall) through opportunities to act 'Vibha's journey is quintessential: from a remote village to a summer internship with astrophysicists and eventually securing admission in an English-medium physics program'. P talks about Vibha who, a decade later, admitted to dropping out of a science career due to 'abysmal teaching quality and dispassionate master's-level physics teachers that made her interest collapse', an arresting reminder that actional capital withers when didactic scaffolds fail. P's other cases trace similar mechanisms from different angles: Yasmin and Partha, 'brilliant' but under-resourced, diverted to bank work and courier service; by contrast, Lokesh and Deven 'team[ed] up to build a low-cost solar dryer' and Rima, with a teacher's help, 'developed a mobile app' for crop disease detection, field-testing it with local farmers. In a student-run STEM club, '8th graders mentored by 12th graders designed a rainwater-harvesting prototype', later adopted locally. This provides evidence that peer mentoring, project ownership, and community linkages are crucial in converting knowledge into 'actional wealth'.

The importance of opportunity structures for actional learning capital was also evident in the documents that were studied, such as programmatic sources on science talent, tinkering laboratories, innovation awards, enrichment initiatives, and mentoring. These documents validated the narratives revealing that actional capital develops through structured opportunities of applying knowledge, building products, conducting inquiry, and receiving feedback. However, these documents lacked evidence about whether such opportunities were equitably accessible to rural, low-income, or non-English-medium gifted learners.

D argues that gifted education in India should be viewed as a national necessity, not a financial burden or market-driven project. Her strategic visits to centers in the USA, like Belin-Blank Center (Iowa) and The Center for Gifted Studies (Kentucky) helped persuade local leaders to re-envision gifted programs as tools for nation-building. She later transformed these efforts into wide-ranging knowledge-sharing initiatives by participating in international and national conferences, launching podcasts and YouTube interviews, leading pan-India discussions with educators, and promoting public awareness about giftedness. Even the shift to calling gifted students *'buddhimaan'* has added meaning and purpose to how gifted education is understood in India.

These narratives along with document analysis align with the Actiotope perspective in which flexible repertoires and rich environments lead to evolving goals (Ziegler et al., 2017; Ziegler & Baker, 2013; Ziegler & Phillipson, 2012). India's exam-centric culture often cultivates narrow 'schoolhouse' techniques

(rapid recall, time-pressured problem sets), while under-utilizing 'creative-productive' actions like in-depth inquiry, repeated and meaningful practice, and expression of knowledge (Renzulli, 1977; Roy, 2017). Hierarchical norms and fear of failure can further limit repertoires (Kurup & Maithreyi, 2012), fostering avoidance rather than exploration with perfectionism in highly competitive environments compounding the risk (Flett & Hewitt, 2014). The opposite is evident when opportunities and acceptance of gifted behaviors widen (such as Atal Tinkering Labs and INSPIRE Awards-MANAK) routinized design, prototyping, and presentation; long-standing programs like JBNSTS that cultivate research actions and scientific discourse; NGO ecosystems (e.g. mobile science labs) bring hands-on actions to resource-poor settings. In P's and D's material, these macro patterns become lived practice: a bicycle commute becomes a language apprenticeship; a nomination scale becomes a lens that authorizes early action; a teacher's open-ended question, a parent network's testimony, or a principal's policy gives a learner the permission (and the place) to try, err, revisit, and persist. In short, actional learning capital in the Indian context is made and remade with changes in mentorship and materials.

Revisiting the panchakosha *approach for holistic talent development (organismic learning capital)*

To both narrators, organismic learning capital (*sharir-man swasthya*) are often-invisible elements that either enable or erode advanced learning. P frames it explicitly: 'learning is not confined to the intellect … it is an interplay of body, energy, emotion, insight, and internal happiness', invoking the ingenious *Panchakosha* philosophy of the 5 sheaths, namely *Annamaya, Praṇamaya, Manomaya, Vijnanamaya* and *Anandamaya*, as a culturally relevant picture of a learner's entire system. Both authors note that schools in India heavily exercise the *Vijnanamaya* intellect through tests, performance-driven tasks, and competitions, while neglecting sleep, nutrition, movement, and emotional well-being. This imbalance, they argue, 'leads to fatigue, anxiety, and inner turmoil that quietly undermines gifted students' capacity to learn'. P recalls her residential camp experience at KGERC, where 'students' energy was contagious'. Each day flowed from morning yoga and meditation to six hours of domain learning, followed by physical play, arts, socio-emotional discussions, and reflective time. *Sattvik* meals (simple, vegetarian, and eaten slowly with gratitude) anchored the rhythm of the day. Also, in some inclusive classrooms, she noted teachers who began with 'a few minutes of deep breathing and silence', later vouched for a calmer, more focused set of students. P also highlights deprivation and depletion through stories like that of Tariq, an Indian Institute of Technology (IIT) aspirant whose physical injury led to psychological distress. Once 'withdrawn and hopeless', his pre-IIT exhaustion combined with post-accident trauma ultimately eroded his motivation and vitality. P's narratives on the state of mind of students during the Covid years, illustrate the extent of compromise required from students due to online schooling which 'compressed bodies into screens affecting their natural rhythms of movement, play, and social connection'. She does not miss noticing and mentioning small positive changes by institutions through 'compulsory Yoga and sports periods', that signal their recovery in a way that a teacher reported: 'my students are beginning to look happier, calmer and more active'.

D's account extends organismic capital from learners to adults who sustain them. Having worked with *Kaivalyadham*, a yoga practice and research institute, she ideates that gifted students could be profiled using indigenous and culturally contextual knowledge and, thus, KGERC 'started profiling students based on *ayurveda*', creating Annamaya workbooks, and aligning camps to follow '*sattvik* lifestyle'. D is blunt about the risks of students' overall growth (urban or rural) caused by poor lifestyle habits. She argues that families and schools can counter this by adopting concrete measures, such as the Tribal Mensa Nurturing Program's approach of sponsoring gym fees for girls with PCOD, organizing outdoor games, and creating routines that build physical strength. Her narrative also surfaces the cost of sustained care in under-resourced systems when an educator mentioned the extent of: 'compassionate fatigue … took a toll on her energy and work life. I needed therapy, medication and self-care to bounce back'. Together, the narratives show organismic capital as both a child's resource and an ecological property of programs and practitioners.

These lived accounts represent organismic learning capital as physiological and constitutional resources in the form of sleep, fitness, nutrition, neuroendocrine balance, that condition cognitive engagement

(Ziegler et al., 2017; Ziegler & Baker, 2013). Evidence that regular physical activity improves attention and task performance (Budde et al., 2008; Hillman et al., 2009) clarifies why P's 'few minutes of deep breathing' and daily movement matter; nutrition research explains her emphasis on *sattvik* meals, with links between diet, concentration, and balanced mood (Blanchflower et al., 2013; Taras, 2005). A humanistic-organismic lens converges with the *Panchakosha* framework to argue that talent development requires systemic attention to body, breath, emotion, and meaning (Raina, 2016). Contemporary policy like National Education Policy 2020, call to nurture body, mind, and spirit, are congruent yet aspirational; the narrators show what enactment looks like: scheduled movement and mindfulness, periodized nutrition, menstrual and sleep health supports, and educator wellbeing practices embedded in program design (Ministry of Education, 2020). D is happy to report that some of the schools she works with have seriously adopted the *Panchakosha* model of nurturing with noticeable results. Thus, one sees organismic learning capital to be cultivated in schools ritualizing care of bodies and emotions with the same intentionality they devote to syllabi; where they do not, even the most able students, like Tariq, can 'disintegrate in ways unfathomable'.

Changing goal ecologies for indian gifted students (telic learning capital)

Telic learning capital (*jeevan lakshya*) in our data appeared as the structure of goals, how they are created, maintained, dropped, or reshaped, with both narrators insisting that it is never purely 'inside' the learner. As P puts it, long-term aims 'cannot be planned in a vacuum' and must be 'reoriented' as students come to understand their 'intellectual, psychological, and social strengths and weaknesses'. Her interview-room memory of Suman captures telic clarity at its core. Asked about his favorite subject, he replied without hesitation, 'Maths', and when a physics question arrived, he paused, then said, 'Sir, I love Maths. May I be asked more questions in that subject?' That unapologetic specificity, nourished later by scholarships and mentoring, withstood family hardship and even a parent's suicide: Suman finished engineering, left a lucrative job to chase advanced study ('ETH Zurich', then a U.S. PhD), and returned as a mathematics professor. In the Actiotope sense, his telic system in changing environments underwent recalibrations, from micro goals (solving the next problem) to macro aims (become a mathematician).

The counterpoint is Sheela. 'Though talented musically', P writes 'Sheela lacked the quantum of task commitment and resilience required for … talent to be transformed' into sustained artistry; praise curdled into pressure, and the joy of singing faded. She questions herself, 'Was it a failure at all? Did I just coast on ability?', before disclosing, 'Sheela … is a pseudonym I have used to represent myself'. These self-revelations construct telic capital as a variable where aims can narrow, stall, or be replaced for more. P's later work with STEM students in distress, 'numerous … battled severe anxiety and depression', forced a goal shift: 'The gifted individual and their holistic development first, domain development later'. Her ambitious 2014 conference project can be read as telic praxis:' starting with a Google search and no physical network, she assembled 22 international speakers with a colleague commenting, 'This has put India firmly on the global gifted education map'. Here, an ambitious purpose became a scaffold for other institutes in India to fast forward their projects and enhance quality research presentation in global forums.

D adopts an institutionalized telic stance: 'we are no less in the world', and 'KGERC should be the torch bearers' for a holistic Indian nurturing model. Her anecdotes show how supportive environments are fertile grounds for lengthening opportunities for gifted students. In rural cohorts, telic growth often begins as defiance against early marriage and patriarchal domination. N, the Founder Director of TMNP, literally 'appeals to families with a girl child to invest in education … just to buy time for girls to realize their potential before marriage and sponsors free and safe accommodation to these young women'. Interacting with TMNP students for more than two decades, D encounters an ethos of purpose that go beyond attainment and achievement, leading to development of a keen spiritual and existential philosophy towards gifted contributions. For example, 'Laxmi, a 17-year-old married and pregnant gifted girl from rural India lamented that because of village tradition she could not pursue her dreams and now with a child. Counselling her involved Laxmi to accept her situation and helping her realize the

importance of prenatal nurturing that will contribute towards her child's physical and mental well-being and nurturing the future generation in her community'.

These narrations align with telic theory, which view telic learning capital as a hierarchical network of immediate and long-term goals shaped by families, peers, and institutional climates. Goals are arranged according to opportunities and constraints. In Suman's case, a mastery-oriented goal in mathematics protected him against major setbacks, however, in Sheela's case, the absence of a sustainable telic support (no long-term *guru*, no clear vocational direction) made disengagement more likely despite high ability. Both narrator's accounts show how high-stakes exams, few non-STEM careers, and the pull of 'safe' professions can narrow telic options in India. Conversely, this capital can be strengthened when adults help students articulate specific goals, guiding them towards realistic pathways, and normalizing lateral shifting in careers (Roy & Mishra, 2021). P and D point to the importance of sustained mentoring, structured conversations about purpose and values, and attention to mental health (e.g. Mishra et al., 2024). In this way, telic learning capital appears as both an inner compass and a shared goal of families, mentors, and institutions, helping gifted young people find life trajectories that are viable, meaningful, and their own (Roy & Mishra, 2021).

Indirect evidence for telic learning capital was found through documents with policy and program documents emphasizing aspiration, excellence, holistic development, and career preparation. However, they offered limited detail on how gifted learners' long-term goals are formed, revised, protected, or redirected under conditions of family expectation, gendered norms, examination pressure, or uneven access. This documentary's pause is analytically important, suggesting that, while goal development is recognized in broad policy language, it remains under-specified as a gifted-education concern. For this reason, the analysis of telic learning capital relies more on the CAE narratives, which captured how goals were negotiated within families, institutions, and cultural expectations.

Imbibing wisdom and transformative encounters (episodic learning capital)

Episodic learning capital (*satsat vivek buddhi*) showed up everywhere in the narratives, charged with feeling and context, making it ready-to-use 'scripts' for what to do next. P frames it simply: 'learning is not linear; it is episodic … woven from encounters, mistakes, reflections and revelations'. Her references are culturally rich: Arjuna's battlefield paralysis becomes the episode that catalyzes insight; the *guru-shishya* world 'facilitated learning through encounters, trials, and awakenings … each an episode that transforms the learner'. Modern echoes abound through 'denied lab access, J. C. Bose turned humiliation into a design problem, building his own instruments from scrap, an episode that 'marked a shift from dependency to autonomy'. Gagan, now an eminent chemist, still returns to the school bench where he once promised a teacher he'd become a scientist; 'just sit on that bench and reminiscence … and feel loved and grateful'. In P's mentoring, episodes cut both ways: Dipti and Ishani 'failed to qualify' at JBNSTS, then later thrived, because a debrief reframed from failure as the real beginning. Amit, studying by candle in a conflict zone, encoded hardship into purpose by building low-cost solar lamps. And a medical student learned the sting of labels when, blanking in a viva, an examiner sneered, 'are you not a JBNSTS Scholar?' a single shaming moment that made her hide the label for months.

D's timeline in itself is episodic. '1999-2010 … I became confident about understanding the gifted and their needs', she notes, explaining how years of overnight camps and regular interactions with Mensa students has given more depth of her understanding towards their needs. After a decade with TMNP, her focus shifted from rural to urban settings, allowing her to apply holistic educational design in a local school that later led to wider advocacy of gifted education practices in India. D's reflections on labeling show how a single interaction can shape identity for years. Among JPIP students, she observed that 'the label of being gifted is so ingrained … even non-gifted behavior gets pulled into that space', with the sense of superiority at times limiting growth. In contrast, for rural TMNP girls, 'the title gifted has lifted their vision … while still allowing them to be themselves'. For her, episodic allies (mentors, peers, a safe flat, a classroom to teach in) counterbalance episodic stigma (taunts, envy) lending cohesion to her narratives.

The theory behind these vignettes is straightforward. Episodic capital captures not just how to act, but also when and why, what P calls 'the pedagogical power of such moments'. Its 'triadic coupling'

emerges as tools (a candle, a lab bench, a YouTube channel), sequences of action (building a solar lamp or rehearsing a raga at midnight) and goals (pass the exam; serve rural kids; find one's voice), joined into routines that are quickly accessed and difficult to unlearn. For Endel Tulving (1927–2023), these are autobiographical anchors; for Csikszentmihalyi (1934–2021) they evoke the 'flow' students experience in hackathons, fairs, and performances and underline how one cruel viva or one teacher's tears can reshape a student's sense of self. India's diversity multiplies such episodes: multilingual homes, festivals, stark rural-urban contrasts, and the *guru-shishya* paradigm where daily *riyaz* (practice), assisting on stage, or a guru's midnight correction become lifelong templates for attention and courage.

Contemporary structures like National Children's Science Congress projects, INSPIRE/IRIS fairs, Indian Institute of Technology (IIT) Techfest's, and Atal Tinkering Labs add modern episodes (fieldwork, prototyping, public critique) that ensure transfer across domains. The pandemic widened episodic learning: 'deprived of regular schooling', P saw students teach siblings online, launch educational channels, and 'hone adaptability, leadership, and creative problem-solving', episodes that fought off despair and competence building.

The narratives give a clear understanding of what needs to be done. First, curriculum must include structured discussions aimed at helping gifted students to reflect on experiences for the purpose of fostering learning, critical thinking, and improved performance. Second, importance must be given to meaningful 'first episodes' like, first public talk, first field visit, first submission to a fair or first failure are recalled quickly and shaped telic direction. Third, careful use of labels: one casual 'gifted' remark can lead to years of masking, while one quiet affirmation can move a child from avoidance to engagement. Finally, wide access to rich learning spaces must be provided for more positive episodes to occur. As P cautions, 'we must not underestimate' learning that erupts in 'informal settings … a solitary stroll after an argument with a teacher, or an unexpected success that forces one to redefine one's limits'. In a culture rich with story and encounter, episodic learning capital is India's quiet superpower; we need to notice it, name it, and multiply it.

Using indigenous practices of ekagrata *(one-pointedness) to protect deep inquiry (attentional learning capital)*

Attentional learning capital (*ekagrata*), in our accounts, is a way of persisting and focusing on the work so that inquiry can deepen. P begins from the everyday admonitions of childhood, 'pay attention to what you are doing', 'focus on your task', and wonders if, as adolescents gather more episodes to learn from, such reminders recede because 'attentional learning and episodic learning are deeply linked'. Her case notes make that link vivid. Sagar, a mathematically precocious Grade 9 student with dyslexia, told her, 'I can see the numbers, but when I try to write them, they run away', a line that revealed his struggle as 'a difference in attentional channeling'. Rakhi, a twice-exceptional learner with cerebral palsy, shows laser-like focus when the medium matches her strengths, 'computer learning, music, geography and travel trivia', reminding us of that context either helps to focus or dilute attention. P admits her own bias of equating 'focus with order and precision with correctness', later realizing 'focus can be fluid and appear as a distraction to others', especially in 'crowded, noisy, exam-driven' classrooms where the outer attention that schools demand (recall, speed, multitasking) clash with the inner attention that deep and focused inquiry requires. Adding a cultural lens, she explains that *shraddha* (devotion) frames attention as reverence rather than grind, something nurtured through relationships with mentors, the subject, and the self. Reflecting on Indian scientists, Raman's fascination with the color blue, Kalam's *Panchakosha*-based discipline, Bhabha's art–science synthesis, and Janaki Ammal's perseverance—read as stories of trained, value-infused attention in terms of the *Panchakosha* model, she explains why attention fades: fatigue in the *annamaya*, turbulence in the *manomaya*, and clouding of the *vijnanamaya*. P suggests that 'stillness of the body can calm the mind, and a calm mind can sharpen perception'. She contrasts two sisters to show how modern life reshapes their attentional fields: Tamanna, 'clearly under a digital spell', answered that she was 'most attentive to a new digital game', while Tanisha, a dance prodigy, 'thriving on a steady and sustained rhythm', used meditation and yoga to practice selective attention as mindfulness. Her core message is to create rhythms that include pauses: 'attention is a form

of care … to attend deeply is to value'—because attention grows in environments that honor stillness as much as activity'.

In her narratives, D's voice expresses telic capital in a managerial manner, and she says: 'I am a goal-oriented person … since 1995, I have had yearly goals, a vision for every five years … dream big and it will unfold'. She provides focus through scaffolding with schedules, products ('books, manuals, research articles'), alliances (Mrs. Malati Kalmadi, Founder Director and D are … aligned towards similar goals'), and timing was crucial ('to bid the right time to launch'). Being candid about frictions, 'incompetencies', and life episodes that test stamina and focus, she has built a system with checks and balances and continues to find motivation toward her mission.

Looking outward, D sees a cohort shift in attentional profiles: '2000-2015 … students were submissive, insecure', needing adults to co-regulate career pathways or manage their personal life, or 'guardians had to suggest visits to counselors for their highly sensitive nature and enable social interactions'. In the last decade, by contrast, 'students are more confident … they just need social spaces to hang out and be themselves, able to make their radical career choices'. Her snapshot complements P's cultural frame: attention is trainable and social, stoked by purpose, held by networks, and derailed by overload.

That overall quality of attentional learning capital (*ekagrata*) predicts performance better than time-on-task alone, is evident through both narratives. In India, traditions of *ekagrata* (one-pointedness), *dharana* (concentration), and *dhyana* (meditation) are valued components, which has also been suggested by the National Education Policy 2020 as activities schools must adopt through wellness clubs and yoga periods. Both authors however warn that contemporary 'informational overload' and competitive exam culture tend to erode attentional wealth, 'weakening the bridges between unfocussed brilliance to deep insight'. Their remedies converge on aligning tasks with strengths (Sagar's oral math; Rakhi's digital pathways), focusing on activities like deep breathing, meditation and reflection, as well as helping students to disengage from digital noise.

The document review yielded limited direct evidence on attentional learning capital as a gifted-education resource. Policy and institutional sources referred more generally to holistic development, yoga, mental well-being, concentration, and experiential learning, but they did not specifically treat attention as a developmental capital for gifted learners. Hence, narratives extended documentary evidence by identifying *ekagrata*, disciplined practice, reduced distraction, and contemplative routines as culturally meaningful attentional resources. The gap between broad policy language and specific attentional supports suggests an area for future gifted-education programming in India. For P and D, also very important, is to treat attention as a relational thread between the teacher and the student through 'reciprocity of attention', and to them, mentors who stay with a problem and families who protect children's focus, and schools respecting children's natural pace and energy levels by providing resting periods to 'make space for attention', are key to developing attentional capital.

Discussion

This collaborative autoethnographic study addressed two research questions by examining how educator-scholars experience India's educational and learning capitals within gifted ecosystems and how indigenous frameworks extend the Educational and Learning Capital Model (ELCM; Ziegler & Baker, 2013; Ziegler et al., 2017). Findings reveal that India's gifted actiotope is neither wholly privileged nor disadvantaged but characterized by strong cultural, social, and didactic capitals alongside fragile economic and infrastructural supports. Giftedness emerges as relational, culturally embedded, and systemically mediated rather than solely individualistic. Similar patterns across Asian and Middle Eastern countries show that family expectations, mentoring systems, cultural values, and educational opportunities significantly shape talent development (Ismail et al., 2022; Pang, 2012; Phillipson et al., 2013; Phillipson & Phillipson, 2012; Smith, 2021). Collectively, these findings support ecological and actiotope-oriented understandings of giftedness in these societies and reflect what Raina and Srivastava (2000, p. 102) describe as a 'clash of ancient, colonial, and contemporary influences'.

Strengths and vulnerabilities of the indian actiotope

Addressing research question 1, educator-scholars consistently experienced cultural, social, and didactic capitals as India's strongest assets for gifted development, while economic and infrastructural capitals remained unevenly distributed. Rooted in the *guru-shishya parampara* and extended family networks, gifted development was experienced as a collective and community-oriented process rather than solely individual achievement. Teachers mentoring students beyond classrooms, institutions celebrating talent, and families sustaining long-term cultivation illustrate how relational learning practices support gifted trajectories.

These findings extend European ELCM research (e.g. Harder et al., 2018; Ziegler et al., 2019) by demonstrating how non-Western cultural and didactic capitals foster actiotope resilience, paralleling gifted ecosystems in Sub-Saharan Africa and the Middle East (Baccassino & Pinnelli, 2023; Hemdan et al., 2022; Naujoks-Schober et al., 2025). Similar patterns across Taiwan, Japan, Malaysia, Singapore, China, and South Korea emphasize the importance of family involvement, mentorship, collectivist values, and culturally mediated motivation in shaping talent development (Chan, 2018; Kim et al., 2020; Kuo, 2022; Pang, 2012; Phillipson et al., 2009; Phillipson & Phillipson, 2012; Phillipson & Yick, 2013; Yong et al., 2024; Yu & Kuo, 2026).

India's cultural capital is strongly reflected in classical music, dance, Ayurveda, Vedic mathematics, and indigenous arts, where continuity of practice and community engagement sustain talent development. Kapoor (2007) similarly argues that Indian knowledge traditions function as both local cultural resources and emerging global intellectual assets. Comparable patterns are evident in Gulf contexts, where family enthusiasm and community initiatives such as the Hamdan Foundation support gifted education despite fragmented policy structures (Ismail et al., 2022).

Didactic capital remains another major strength through mentorship-oriented initiatives such as the Jagadis Bose National Science Talent Search (JBNSTS), Tribal Mensa Nurturing Program (TMNP), and Kaveri Gifted Education and Research Center (KGERC), which adapt the guru–shishya tradition through personalized guidance and sustained talent cultivation. These programs align with talent development frameworks proposed by Renzulli (1977, 1988), Gagné (1995), and Subotnik et al. (2011), while reflecting indigenous/guru–shishya pedagogical traditions centered on sustained, personalized mentor–disciple relationships (Behl & Pattiaratchi, 2023).

Despite these strengths, economic and infrastructural capitals remain uneven. Under-resourced rural schools, limited laboratories, and digital disparities confirm global rural–urban inequities (Agrawal, 2014; Ulubaşoğlu & Cardak, 2007) and challenge assumptions of equitable provision within some ELCM validations (Hemdan et al., 2022; Vladut et al., 2015). Although initiatives such as Jawahar Navodaya Vidyalayas, scholarships, and Olympiads in India attempt to address these gaps, their reach remains geographically and socioeconomically constrained.

Participating educator-scholars described considerable variation in telic and attentional learning capitals. Strengths emerged through culturally embedded practices such as arts training, yoga, and disciplined *sadhana*, which fostered concentration, resilience, and mindfulness. These observations align with research linking attention, anxiety, and academic performance while also highlighting concerns about multitasking, digital distraction and cognitive overload in contemporary education (Grills-Taquechel et al., 2013; Junco, 2012; May & Elder, 2018; von der Embse et al., 2018). However, India's high-stakes examination culture frequently erodes telic capital, with students reporting burnout, anxiety, and abandonment of artistic interests in favor of academic achievement (Deb et al., 2014; Kanderi, 2025; Pienyu et al., 2024). Similar patterns of examination stress, perfectionism, and identity pressure have been reported across East and Southeast Asia, where intense academic competition, familial expectations, and collective achievement cultures often conflict with student well-being (Chen et al., 2018; Fong & Yuen, 2014; Park et al., 2025). Brahmi et al. (2025) further suggests that psychosocial resources such as perspective-taking, self-direction values, openness to experience, and mindful planning are positively associated with academic performance, particularly in science, indicating that STEM achievement is supported not only by cognitive ability but also by socio-emotional and self-regulatory capacities.

Although *Panchakosha* -based interventions emphasize holistic attentional development and support culturally grounded approaches to resilience and balance (Desai & Manasawala, 2023), perfectionist academic expectations, familial pressure, and digital distractions intensify vulnerabilities beyond patterns commonly observed in Western collegiate actiotopes (Hazra & Kant, 2024; Kumar, 2025; Kumar et al., 2024; Phillipson et al., 2018; Wit, 2017).

Beyond STEM: a broader understanding of giftedness

Responding to research question 1, the findings challenge the dominant association of giftedness in India with STEM achievement alone by highlighting excellence across arts, leadership, community engagement, and ethical or spiritual domains. Although science and technology continue to receive the greatest institutional emphasis, Indian traditions have historically conceptualized giftedness as multidimensional, encompassing intellectual, artistic, moral, and spiritual capacities (Kumar, 2005). This broader conception contrasts with STEM-oriented Western models and reflects the culturally embedded nature of Asian gifted ecosystems (Baccassino & Pinnelli, 2023; Chan, 2018). Research from the Asian continent is critical of narrow academic definitions of giftedness and emphasizes creativity, leadership, spirituality, artistic talent, and socio-emotional development as important dimensions of high ability (Chan, 2008; 2018; Mantak & Ricci, 2013; Porath, 2013).

Non-STEM talents are often sustained through cultural, social, and didactic capitals, including village patronage networks, arts scholarships, and informal mentoring, supporting Kapoor and Shizha's (2010) argument that indigenous support structures continue to nurture artistic and community-based giftedness in India. However, tensions prevail, as many families continue to prioritize socially prestigious academic careers over artistic or athletic pathways (Kumar, 2005; Raina, 2016), despite National Education Policy 2020 reforms advocating broader recognition of arts, sports, and vocational pathways.

Integrating ELCM with indigenous frameworks

Addressing research question 2, this study demonstrates strong convergence between the Educational and Learning Capital Model (ELCM) and indigenous Indian frameworks while extending giftedness theory beyond Western psychometric and individualistic perspectives. A major conceptual contribution lies in integrating ELCM with *Panchakosha* and the *guru–shishya parampara*. While ELCM conceptualizes giftedness through interactions among educational and learning capitals, the *Panchakosha* framework from the *Taittiriya Upanishad* (6th and 5th centuries BCE) offers a holistic model of human development through five *koshas* or sheaths, enriching organismic, attentional, telic, and episodic learning capitals (Desai & Manasawala, 2023). Educational practices combining yoga, balanced nutrition, emotional engagement, reflective learning, and domain-specific training were found to strengthen multiple *koshas* simultaneously, supporting intellectual, emotional, physical, and ethical development.

The *guru–shishya parampara* further extends ELCM by strengthening didactic, social, and telic capitals through sustained mentorship, moral guidance, and relational learning. Contemporary adaptations such as research mentorships, STEM clubs, and enrichment programs demonstrate how traditional pedagogy continues to hold its space in Indian gifted education. Comparable patterns are evident in Middle Eastern, Singaporean, and Hong Kong contexts, where strong mentoring systems coexist with infrastructural inequalities and intense educational competition (Chan, 2008; 2018; Ismail et al., 2022).

The study also extends ELCM's principle of circular causality (Ziegler & Stoeger, 2019) through the concept of *sadhana*, understood as lifelong disciplined practice directed toward mastery and self-transformation. Unlike Western deliberate-practice models, *sadhana* incorporates moral and spiritual dimensions, resonating with Chan et al. (2026) finding that meaning in life and character strengths support gifted students' well-being and perceived academic achievement through social connectedness. Overall, the findings reorient giftedness toward a holistic conception encompassing *jnana* (wisdom), *prajna* (discernment), and *lokasangraha* (social responsibility), while showing how relational traditions can sustain talent development despite persistent infrastructural inequities.

Table 1. ELCM Capitals in the context of India's gifted education.

Capital type	Strengths	Vulnerabilities
Educational (Cultural/Social/Didactic)	Relational learning, Mentorship traditions, *Guru-shishya* parampara	Urban bias
Educational (Economic/Infrastructural)	Scholarships, Olympiads, Tinkering labs	Urban-Rural gaps, Poverty, Lack of infrastructure
Learning (Telic/ Attentional)	Arts/ meditation/ yoga foster resilience and focus, Mentoring	Exam pressure, Digital Distractions, Burnout in STEM
Learning (Organismic, Episodic, Actional)	Panchakosha holistic development, Sadhana, Discipline, Mindfulness, Yoga	Mental health stigma, Lack of counselling services, Episodic overload, Malnutrition

ELCM capitals in the Indian gifted education context clearly indicates a combination of strong socio-cultural-didactic strengths and infrastructural-economic vulnerabilities that go hand in hand in India's educational tapestry (see Table 1).

*The Ecosystem model of giftedness development (***pratibha aalaya***)*

Synthesizing findings from both research questions, this study proposes the Ecosystem Model of Giftedness Development, *Pratibha Aalaya* ('Abode of Talent') (Figure 1), as a culturally grounded extension of the Educational and Learning Capital Model (ELCM; Ziegler & Baker, 2013).

Integrating Indian philosophical traditions with systemic theories of giftedness, the model advances earlier ELCM validations (Vladut et al., 2015) by incorporating prenatal influences through *garbha sanskar* and transcendental dimensions represented by the *pradnyawant vyakti* or wise accomplished individual (Verma & Shukla, 2023). It also builds upon applications developed through the Kaveri Gifted Education and Research Center (KGERC; Desai et al., 2024) while aligning with broader global equity-oriented giftedness frameworks (Plucker & Barab, 2005; Subotnik et al., 2011). The model also aligns with emerging Asian ecological approaches to giftedness (McInerney, 2013) that interpret talent development as a dynamic interaction among learners, families, institutions, and cultural systems rather than as the product of isolated cognitive ability (Barab & Plucker, 2002; Dai, 2017; 2020).

In the lower section of the model, *garbha sanskar* highlights prenatal influences on cognitive, emotional, moral, and psychological development through maternal well-being, nutrition, emotional bonding, and cultural practices such as Vedic chanting (Glover, 2011; Verma & Shukla, 2023). These ideas parallel Renzulli's (1988) emphasis on task commitment and resonate with talent development frameworks that conceptualize expertise as emerging through sustained practice, environmental support, and deliberate training (Subotnik et al., 2011; Ziegler, 2005). The upper section of the model depicts transformation toward the *pradnyawant vyakti*, integrating *jnana* (wisdom), *prajna* (discernment), and *lokasangraha* (social responsibility), thereby extending giftedness beyond psychometric achievement into moral, relational, and transcendental dimensions.

The *Pratibha Aalaya* model helps us see giftedness not as a fixed trait or endpoint of achievement, but as a lifelong, ecological, and transcendental journey of human becoming. Extending from prenatal foundations to realized excellence and spiritual fulfilment, the model conceptualizes gifted development as a dynamic interaction between educational capitals—economic, infrastructural, cultural, social, and didactic—and learning capitals such as organismic, telic, attentional, episodic, and actional capacities. Its spiral architecture symbolizes continuous exchanges between the individual and the environment across the lifespan, advancing ELCM's principle of circular causality (Ziegler & Stoeger, 2019). In doing so, the model resonates also with East Asian perspectives emphasizing persistence, disciplined practice, family commitment, and culturally structured opportunity as collective drivers of talent development (Chan, 2018; Phillipson et al., 2013; Phillipson & Phillipson, 2012; Phillipson & Yick, 2013). However, unlike many Western giftedness models that culminate in expertise or measurable performance, *Pratibha Aalaya* positions giftedness within an ongoing process of *sadhana*—disciplined self-cultivation directed toward *Saadhya*, or realized excellence grounded in wisdom, purpose, and contribution.

The model further demonstrates how indigenous practices such as yoga, Panchakosha-based development, and *guru–shishya* mentorship simultaneously strengthen educational and learning capitals, integrating cognitive, emotional, ethical and spiritual growth within a single developmental ecosystem. By synthesizing these traditions with ELCM, *Pratibha Aalaya* offers more than a culturally responsive

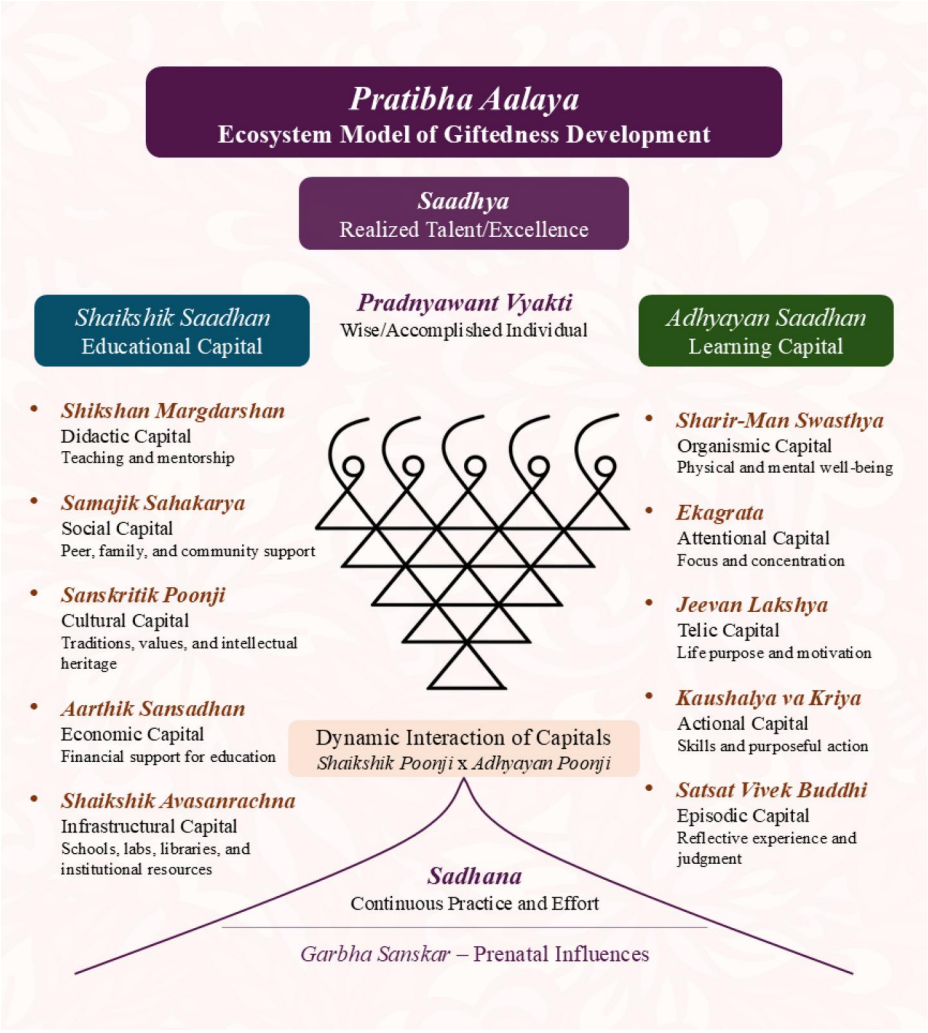

Figure 1. *Proposed Ecosystem Model of Giftedness Development (Pratibha Aalaya).*

framework for NEP 2020-aligned gifted education and presents a future-oriented paradigm for cultivating resilient, reflective, and socially conscious individuals in an era marked by artificial intelligence, inequality, ecological uncertainty, and cultural fragmentation. Moreover, parallels between Indian, Asian and Middle Eastern gifted ecosystems—where strong cultural and relational capitals coexist with infrastructural inequities—suggest that *Pratibha Aalaya* may serve as a scalable actiotope model for holistic and equitable talent development. Future comparative research across Asian contexts could further illuminate how culturally grounded ecological frameworks can preserve local philosophical traditions while preparing gifted learners for complex global futures.

Conclusion

The findings suggest that an ELCM–indigenous lens can help shift gifted education in India from scattered initiatives toward a more coherent and culturally relevant approach. Rather than treating giftedness as a marginal category, the Actiotope framework along with Indian perspectives, support an ecosystemic understanding where educational and learning capitals interact continuously.

Methodologically, the study shows how collaborative autoethnography within the ELCM framework reveals practitioner insights while linking individual narratives with broader educational contexts and highlighting India's potential contribution to global gifted education by framing talent development as holistic, relational, and ethically grounded. Participant narratives illustrate how didactic support, social collaboration, cultural values, infrastructure, and economic resources shape opportunities for gifted learners in India.

The proposed Ecosystem Model of Giftedness Development (*Pratibha Aalaya*) model provides a indigenous framework by integrating Western constructs of learning capital with Indian concepts such as *guru–shishya parampara*, *ekagrata*, *kaushalya*, and *jeevan lakshya*. Educational capital forms the structural foundation, while learning capital represents the internal resources learners use to engage with opportunities. The integration of the *Panchakosha* model highlights the need for holistic development—balancing physical, emotional, intellectual, and motivational dimensions—thereby supporting environments that nurture curiosity, mentorship, creativity, and the development of *pradnyawant* (holistically developed) individuals.

There is an urgent need for expanding educational capitals, particularly infrastructural and didactic resources in underserved regions and cultivating learning capitals through camps, mentorship, and school programs addressing organismic, telic, episodic, and attentional dimensions. Key priorities include operationalizing the National Education Policy 2020, by integrating *Panchakosha* and *guru–shishya* style mentorship across domains, including STEM, and emphasizing attention and well-being through practices such as yoga, and pranayama and responsible digital habits. It will help if future research could map educational and learning capitals across Indian programs, incorporate perspectives of students, parents, and policymakers, and examine long-term effects of *Panchakosha* and *guru–shishya* based interventions.

Author contributions

CRediT: **Paromita Roy**: Conceptualization, Data curation, Formal analysis, Methodology, Visualization, Writing – original draft, Writing – review & editing; **Anyesha Mishra**: Conceptualization, Data curation, Formal analysis, Methodology, Visualization, Writing – original draft, Writing – review & editing; **Devasena Desai**: Conceptualization, Data curation, Formal analysis, Methodology, Visualization, Writing – original draft, Writing – review & editing.

Artificial intelligence use declaration

The authors used OpenAI's ChatGPT 5, 5.1, 5.4 and 5.5 solely to improve the clarity, grammar and overall readability of the text. The authors declare all intellectual contributions, analyses, and conclusions remain in their work, and they took steps to ensure accuracy of any AI-generated content, and that it contained no plagiarism or bias.

CRediT author statement

Paromita Roy: Conceptualization, Methodology, Data curation, Formal analysis, Writing – original draft, Writing – Review & Editing.

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Devasena Desai: Conceptualization, Methodology, Data curation, Formal analysis, Writing – original draft, Writing – Review & Editing.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Ethical approval

This research did not require IRB approval because it is an autoethnographic study utilizing authors' personal experiences and document analysis of publicly available information. Also, all cases used by narrators have been anonymized (or pseudonyms used).

Funding

The authors received no financial support for this work.

About the authors

Paromita Roy, Ph.D., is a psychologist. After 32 years at the Jagadis Bose National Science Talent Search (JBNSTS), Kolkata, she retired as Deputy Director. During her tenure, she designed, implemented, and evaluated science-

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Dr. Desai serves as India's Coordinator for the European Talent Support Network (ETSN) and sits on the editorial board of Springer's *Advancing Inclusive and Special Education in the Asia Pacific* series and the Indian Academy of Professional Supervisors. She was an Adjunct Lecturer at the University of Iowa (2018–2024) and has received distinctions including a Belin-Blank Center fellowship, an ICASSI scholarship, and Utrecht University research support. Her international engagement includes several invited presentations across Europe and Asia.

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Data availability statement

The data that support the findings of this study are available from the corresponding author, A.M., upon reasonable request.

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