

Entangled Learning: Rewilding Education through Posthuman Pedagogy for Multispecies Synergies

Dr. Shisira Bania  

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Abstract:

This article explores entangled learning as a posthuman pedagogical framework that reconfigures education beyond human-centered paradigms toward relational, multispecies co-learning. Challenging the anthropocentric foundations of traditional education, posthuman pedagogy reimagines learning as a distributed, material-discursive process that unfolds through dynamic intra-actions among human and more-than-human agents—including animals, plants, technologies, and ecosystems. This study conceptualizes rewilding education as an alternative to industrialized schooling models, advocating for relational, flexible, and ecologically cohabited learning spaces. The paper further explores multispecies education as a practice of interspecies co-learning that honors the agency and communicative capacities of nonhuman beings, particularly in child-centered and outdoor educational contexts. Through a critical discourse analysis of key theoretical and empirical literature, the study interrogates the ethical, ontological, and epistemological implications of integrating posthumanist approaches into contemporary teacher education. It identifies structural and ideological challenges—such as regulatory constraints, colonial legacies, and anthropocentric curriculum standards—that inhibit the adoption of posthuman pedagogy. It proposes a pedagogical framework for rewilding education, offering practical principles to create ecologically attuned, inclusive, and ethical learning spaces that cultivate relational accountability and collective well-being in a shared world. By centering



multispecies synergies, ecological care, and planetary well-being, this article offers a vital educational framework for navigating the complexities of the Anthropocene and fostering a more inclusive and sustainable future.

Keywords: Entangled Learning, Posthuman Pedagogy, Rewilding Education, Multispecies Synergies.

Introduction

In an era marked by escalating ecological crises, rapid biodiversity loss, climate disruptions, and the accelerating pace of technological innovation, education is increasingly being called upon to respond in more reflective, ethical, and future-oriented ways (Mayse). Traditional paradigms rooted in anthropocentric, industrial-age models are proving inadequate in addressing the complex, interdependent challenges of the Anthropocene (Rendtorff). Consequently, educational thought and practice are undergoing a profound process of reconceptualization (Simmonds). At the forefront of this shift is the convergence of posthuman philosophy, ecological rewilding, and multispecies relationality, which together offer a radical and transformative framework for reimagining what it means to teach and learn in a more-than-human world (Cremin). Rather than positioning humans as isolated, rational actors at the center of pedagogical concerns—this emerging framework emphasizes entanglement, interdependence, and co-agency between human and nonhuman beings—including animals, plants, ecosystems, and technologies (Copeland et al.). It calls for a reorientation of education toward practices that are ecologically embedded, ethically responsive, and inclusive of diverse forms of intelligence and lifeways. In doing so, it opens up new possibilities for educational futures that are grounded in care, reciprocity, and multispecies flourishing (Meijer).

Entangled Learning represents a transformative and emergent approach to education that fundamentally challenges traditional anthropocentric pedagogical models

by embracing posthuman perspectives and fostering a deep appreciation for multispecies relationships (Gedik; Gachago et al.). Rooted in the philosophical underpinnings of posthumanism, this model of learning shifts the focus from human-centered knowledge production to a more distributed and relational understanding of learning as an interconnected process. It acknowledges that education does not occur in isolation within the confines of human cognition alone, but rather unfolds through dynamic interactions among diverse agents across species, technologies, and ecologies. This educational paradigm emerges from the intersection of posthuman theory, ecological restoration principles, and critical pedagogy, proposing a radical reimagining of how learning occurs within complex, symbiotic, and ever-evolving networks of human and more-than-human entities (Copeland et al.). It encourages learners and educators alike to question dominant narratives of mastery, control, and human exceptionalism by engaging with the ethical, ontological, and epistemological dimensions of learning that extend beyond the human. Rather than viewing education as a purely human enterprise, entangled learning recognizes the agency, intelligence, and knowledge systems of nonhuman actors—including animals, plants, artificial intelligences, microbial life, and entire ecosystems—as active participants in the co-creation of educational experiences (Meijer). By doing so, it offers a more inclusive, responsive, and ecologically attuned vision of pedagogy that is urgently relevant in the face of planetary crises and the need for sustainable coexistence.

Objectives of the study

The present study seeks to explore and conceptualize entangled learning as a transformative, posthuman pedagogical framework that reimagines education beyond anthropocentric and industrialized models. Specifically, the study aims to:

1. To examine the theoretical foundations of posthuman pedagogy.

2. To conceptualize rewilding education as a transformative pedagogical framework fostering ecological consciousness, relational ethics, and multispecies co-flourishing.
3. To investigate practical strategies and pedagogical practices that integrate multispecies relationality and posthuman perspectives into educational settings.
4. To identify the key challenges, ethical considerations, and implications for implementing posthuman and rewilded pedagogies in diverse contexts.

Methodology of the Study

This study adopts a conceptual and discourse-analysis methodology, aimed at rethinking education in the context of the Anthropocene through the lenses of posthumanist theory, ecological rewilding, and multispecies relationality. Rather than generating empirical data, the study critically interrogates the ideological, ethical, and ontological assumptions embedded in dominant educational paradigms and explores alternative discourses that support more inclusive, ecologically attuned pedagogies. Discourse analysis method has been used to examine how educational discourses construct the human subject, marginalize nonhuman agency, and perpetuate binary hierarchies, while also amplifying counter-discourses that foreground ecological ethics and multispecies relationality.

An interdisciplinary literature review was conducted through keyword searches in Scopus, Web of Science, ERIC, and Google Scholar, using terms such as “posthuman education,” “entangled pedagogy,” “rewilding learning,” “intra-action,” “ecopedagogy,” “multispecies learning,” and “decolonial ecology.” From an initial pool of 112 scholarly sources, a final set of 36 texts was selected for in-depth conceptual analysis based on their alignment with the research objectives. These texts span a range of disciplines, including posthuman philosophy, education theory, environmental humanities, sociology, cultural studies, animal studies, and decolonial scholarship. Inclusion criteria focused on peer-

reviewed journal articles, scholarly monographs, and book chapters published between 2010 and 2025, with an emphasis on works contributing to theoretical and pedagogical debates around post-anthropocentric and ecologically attuned education.

Several major works underpin this study's theoretical and pedagogical framework. Karen Barad's "Troubling Time/s and Ecologies of Nothingness" and her concept of "intra-action" (Barad; Kleinman & Barad) provide a foundational ontological shift toward relational becoming. Rosi Braidotti's posthuman theory, particularly her articulation of the "nature-culture continuum," informs the rejection of human exceptionalism (Braidotti). Donna Haraway's cyborg and companion species thinking is indirectly echoed in discussions of multispecies co-agency. Tim Fawns' "An Entangled Pedagogy" contributes a practical lens for understanding the mutual constitution of technology, pedagogy, and values (Fawns), while Hilary Cremin's *Rewilding Education* serves as a key text reimagining schools as living, ecological systems. Eva Meijer's work on animal communication and children's multispecies learning (Meijer) is central to theorizing interspecies pedagogy. Empirical and applied perspectives from scholars like Daniela Gachago et al. on equity-oriented learning design, Michael Sitka-Sage et al. on critical rewilding, and Copeland et al. on experiential posthuman pedagogy, collectively inform the study's approach to integrating theory with practice. Together, these texts construct a richly layered foundation for posthuman, rewilded, and multispecies pedagogies in the Anthropocene.

Theoretical Foundations of Posthuman Pedagogy

Posthuman pedagogy fundamentally challenges the Western humanistic tradition that positions humans as the central measure of all things, what Braidotti describes as the 'Man of Reason' paradigm (Braidotti). This pedagogical approach draws extensively from feminist posthuman theory, particularly the work of scholars like Rosi Braidotti, Karen Barad, and Donna Haraway, who argue for a more-than-human understanding of agency

and knowledge production (Strom and Mills). The posthuman condition recognizes what Braidotti calls the "nature-culture continuum," which dissolves categorical distinctions between human and nonhuman entities in favor of understanding them as mutually constituting assemblages (Braidotti).

Central to posthuman pedagogy is Karen Barad's concept of agential realism, which proposes that phenomena emerge through "intra-actions" rather than interactions between pre-existing entities (Kleinman and Barad). In educational contexts, this means that knowledge is not transmitted from teacher to student but emerges through the dynamic entanglements of multiple agencies including humans, materials, environments, and technologies (Gachago et al.). This onto-epistemological approach fundamentally reconceptualizes learning as a material-discursive practice where meaning and matter are co-constituted (Braidotti).

Tim Fawns' concept of "entangled pedagogy" provides a crucial framework for understanding how technology, pedagogy, purpose, context, and values are mutually constituting rather than hierarchically ordered (Fawns). This approach recognizes that educational practices emerge through complex networks of relations where agency is distributed across multiple actors rather than concentrated in human subjects alone. The entangled model emphasizes collaboration, uncertainty, and responsiveness as key characteristics of effective educational design (Fawns).

Posthuman pedagogy employs diffractive reading and teaching methods that attend to patterns of difference and interference rather than seeking to represent fixed knowledge (Fjeldstad). This approach, inspired by feminist science studies, involves reading multiple texts, experiences, and phenomena through each other to generate new insights and possibilities (Strom and Mills). Teachers become what some scholars call "barycentric pedagogues" who facilitate learning assemblages rather than directing knowledge transmission (Fjeldstad).

Entanglement as Educational Principle

Karen Barad's concept of "intra-action," a core element of her agential realism, provides a foundational theoretical framework for rethinking how learning and agency unfold within educational contexts (Kleinman and Barad). Unlike the conventional notion of 'interaction,' which presumes the existence of independent, pre-formed entities that come together in relation, intra-action posits that entities do not precede their relations. Instead, they emerge through their relational entanglements—they are mutually constituted in the very process of becoming. This ontological shift moves us away from dualistic thinking (e.g., teacher vs. learner, human vs. environment) and toward a more relational ontology that recognizes the co-emergence of subjectivity, agency, and knowledge through complex, ongoing encounters (Kleinman and Barad).

In educational settings, this means that learners, teachers, materials, technologies, physical spaces, and more-than-human actors (such as animals, plants, and ecological systems) do not simply exist as autonomous agents participating in education (Saari). Rather, they are enacted through the intra-active dynamics of learning itself. Knowledge is not a static entity transmitted from one subject to another; it is generated through entangled practices, where meaning and matter are co-produced. Barad's framework implies that learning is not merely epistemological (about knowing) but also ontological (about being and becoming), thereby blurring the boundaries between knowledge, identity, and environment.

As such, educational environments must be reconceived not as neutral containers for human-centered learning, but as material-discursive assemblages in which physical, social, technological, discursive, and more-than-human elements are inextricably linked in shaping the learning process (Sakçak). Walls, furniture, digital platforms, climate conditions, animals, and microbial life are not passive backgrounds but active participants in the constitution of pedagogical encounters. This perspective fundamentally challenges dominant models of pedagogy that center the human subject and instead invites educators

to engage with the ethical, material, and affective dimensions of learning as emergent and distributed across bodies, spaces, and species.

Rewilding Education: From Control to Co-existence

The notion of rewilding education draws conceptual and philosophical inspiration from ecological restoration practices, which aim to re-establish autonomous natural processes, promote biodiversity, and reduce human overmanagement of ecosystems (Sitka-Sage et al.; Cremin). In the educational context, rewilding emerges as a counter-hegemonic response to technocratic, industrialized models of schooling that emphasize uniformity, surveillance, and instrumental learning outcomes. It proposes a radical rethinking of pedagogical paradigms by shifting from hierarchical, standardized, and compartmentalized systems of instruction toward more decentralized, organic, and ecologically responsive frameworks of learning.

Rather than perceiving the educational institution as a mechanistic factory designed for producing measurable outputs, educational rewilding reconceptualizes it as a complex, living ecosystem. This ecological metaphor highlights the dynamic interdependence of all educational elements—learners, educators, content, community, environment, and materials—each functioning as a vital node within a broader pedagogical web. It promotes adaptable, innovative, and resilient learning environments that embrace diverse intelligences and epistemologies. It encourages pluralism in pedagogical methods, values diversity in learner needs and backgrounds, and cultivates an educational ethos grounded in care, sustainability, and interconnectedness (Cremin).

A cornerstone of rewilding education is the reintegration of nature into the learning process—not as an inert resource to be extracted for academic ends, but as an ontological and epistemological partner in learning. Nature, in this vision, becomes a co-teacher—offering multisensory, embodied, and affective experiences that cannot be replicated within the confines of traditional classroom walls. Pedagogical strategies such as outdoor classrooms, place-based education, ecological inquiry, and community-engaged

environmental projects immerse learners in real-world contexts. These approaches foster a profound sense of ecological consciousness, rootedness, and ethical responsibility. Empirical studies affirm that such nature-based learning environments promote enhanced cognitive performance, emotional regulation, physical health, and socio-emotional resilience. Moreover, they nurture a deep-seated ethic of care, reciprocity, and ecological stewardship among students (Rymanowicz et al.; MacQuarrie et al.).

Furthermore, educational rewilding promotes *experiential and holistic modes of learning* that engage the whole person—mind, body, spirit, and senses. In contrast to disembodied, abstract instruction that privileges rote memorization and decontextualized knowledge, rewilding supports tactile, participatory, and inquiry-based practices. These may include environmental monitoring, wildlife observation, seed saving, composting, traditional ecological knowledge (TEK), and creative expressions using natural materials. Such activities foster both ecological literacy and praxis-based understanding, while also honoring indigenous and local knowledges that are often marginalized within mainstream curricula (Bates). Learning is thus situated, relational, and materially grounded, enabling learners to cultivate a sense of agency and belonging within the ecological and cultural landscapes they inhabit (Rymanowicz et al.).

At its core, rewilding education is a decolonial, ethical, and ecological imperative. It challenges dominant paradigms of control, commodification, and anthropocentrism in education, calling instead for modes of co-existence, reciprocity, and relational accountability. It invites educators to reimagine their roles not as gatekeepers of knowledge but as facilitators of emergent, co-constructed learning ecologies. Learners are not passive recipients but active participants, attuned to the rhythms and responsibilities of the more-than-human world.

Ultimately, educational rewilding is not merely a return to nature, but a forward-looking pedagogical movement that reclaims education's capacity to nurture wonder, respect, resilience, and planetary well-being. It urges the cultivation of a future-ready

generation—one that is ecologically literate, emotionally intelligent, and ethically grounded in practices of co-flourishing with the Earth.

Multispecies Education: Synergies of humans and nonhumans

Multispecies education is an emergent and transformative pedagogical paradigm that challenges anthropocentric models of schooling by fostering shared learning experiences between human and nonhuman beings. Rooted in posthumanist and ecopedagogical thought, this approach conceptualizes education as a dynamic, interspecies process that takes place within multispecies communities—complex, entangled assemblages in which human and nonhuman agents co-exist, co-learn, and co-evolve (Widrig). It recognizes that spaces such as cities, schools, gardens, and neighborhoods are not exclusively human domains but are ecologically interwoven habitats where plants, animals, fungi, microbes, and humans participate in mutual processes of sense-making, adaptation, and meaning construction.

Eva Meijer's works have been instrumental in articulating how multispecies education entails the co-creation of new forms of communication, play, knowledge production, and collaboration that cross species boundaries. Meijer's works underscores that learning does not occur solely through human linguistic or cognitive channels, but also through gestures, sounds, movements, and spatial interactions that are meaningful across species. In this view, education is reconceived not merely as a cognitive transaction, but as a relational, affective, and embodied practice in which humans and nonhumans negotiate shared understandings and develop forms of interspecies solidarity (Meijer).

Multispecies education takes diverse and context-specific forms. These range from school gardens—where learners engage directly with plants, pollinators, and soil organisms in hands-on, place-based learning—to classroom environments that include therapy animals, fostering empathy, emotional regulation, and cross-species

companionship (Khan and Bowen). Importantly, however, multispecies education does not merely entail bringing animals or ecological elements into anthropocentric educational settings for human benefit. Rather, it emphasizes learning in ecologically cohabited spaces—wetlands, forests, urban green zones, and rural ecosystems—where both human and nonhuman beings alike are recognized as rightful inhabitants. In these contexts, educational activities are co-shaped by the behaviors, rhythms, and responses of multiple species, rather than being solely directed by human objectives.

Children, in particular, play a vital epistemological and ethical role in advancing multispecies pedagogies. Research shows that children often possess a heightened sensitivity to the emotional states, habits, and communicative cues of nonhuman animals and are capable of forming deep empathetic bonds with other species (Meijer). Their imaginative capacities, intuitive understandings, and affective investments enable them to navigate multispecies relations with openness and care—traits that are often dulled or repressed by adult-centric schooling systems. Consequently, multispecies education positions children not only as learners but as co-designers of more inclusive, relationally attuned educational futures.

At the heart of multispecies education lies the principle of *democratic inclusion*—an insistence that both human and nonhuman beings deserve recognition as stakeholders in the decisions that shape their shared environments and learning experiences (Saari). This ethical stance demands the development of novel institutional frameworks capable of accounting for *nonhuman agency*, interests, and well-being. It calls for educational planning and policy to attend to more-than-human voices—those expressed not through verbal speech but through behavior, ecology, presence, and affect. For example, the well-being of therapy dogs, the habitat needs of pollinators in school gardens, or the preservation of microbial life in soil curricula must all be considered with equal seriousness to human concerns.

Multispecies education is thus not simply an innovative pedagogical technique—it is a transformative worldview that challenges the boundaries of who can teach, who can learn, and who belongs in educational spaces. By reconfiguring education as a multispecies endeavor, this approach opens pathways for co-flourishing in a shared world marked by ecological interdependence, vulnerability, and hope.

Pedagogical Framework for Rewilding Education

Research indicates that wild pedagogies can be effectively implemented through four key areas that reconfigure educational spaces, practices, and relationships (Van Tol and Wals). First, *wild and caring learning spaces* emphasize the creation of outdoor environments that foster rich human–more-than-human interactions (Lynch). Schools can develop biodiverse outdoor classrooms and living landscapes that invite learners to immerse themselves in natural environments regularly, regardless of weather conditions, cultivating care and attentiveness to multispecies presence. Second, *learning from self-will and wonder* as proposed by (Van Tol and Wals) foregrounds curiosity-driven, student-centered approaches that privilege children’s interests, questions, and discoveries. Practices such as slow pedagogy (Keel), which allow time for deep observation and reflection, as well as opportunities for unstructured exploration, nurture wonder and relational knowing. Third, *relational learning with the world* integrates mindful observation, embodied exercises, and creative imagination to foster a sense of entanglement with other-than-human life. Activities like sit-spot journaling, phenological tracking, and role-playing from nonhuman perspectives cultivate empathy and attentiveness to the rhythms and agencies of the more-than-human world. Finally, *disruptive learning for the world* challenges anthropocentric norms and assumptions embedded in conventional education, inviting learners to undergo inner transformation through emotional connection to place and species. This dimension fosters a deep sense of responsibility, ethical care, and environmental stewardship as learners come to see themselves as participants in planetary well-being (Van Tol and Wals).

Complementing these wild pedagogies are specific more-than-human practices that cultivate multispecies synergies in education. *Becoming-wild with materials* involves reimagining everyday objects and materials not as inert resources but as active co-creators of knowledge and meaning (Hankin and Hogarth). *Pedagogies of attunement* invite students and teachers alike to listen and respond to the teachings of more-than-human entities—birds, plants, water, and landscapes—learning through quiet attentiveness and reciprocity (Sidebottom and Mycroft). Finally, *multispecies storytelling* employs narratives and creative expressions that center the voices, experiences, and perspectives of nonhuman beings, helping learners to imagine the world through diverse, entangled subjectivities (Radomska). Together, these practices enact a posthuman, rewilded pedagogy that is grounded in care, wonder, attunement, and ethical responsibility for the more-than-human world.

The pedagogical framework for rewilding education also aligns closely with the philosophical premise of constructivism, particularly in its emphasis on learners as active participants in meaning-making through their interactions with the world. Just as constructivism posits that knowledge is constructed rather than transmitted (Riegler), rewilding education views learning as an emergent, relational, and situated process that unfolds within dynamic human and more-than-human entanglements. Instead of a fixed body of knowledge to be mastered, learning is seen as co-constructed through lived experiences with multispecies others, ecological systems, and material environments. This resonates with social constructivist perspectives (Vygotsky & Cole) that stress the importance of context, interaction, and cultural mediation in learning processes. Rewilding education extends these principles beyond the human realm, recognizing that meaning is not solely generated through human discourse but also through affective, sensory, and embodied encounters with the more-than-human world. In doing so, it reconfigures constructivism through a posthumanist lens—shifting the focus from

individual cognition to distributed, collective, and ecological forms of knowing and becoming.

Challenges and Critical Considerations

Despite its theoretical appeal, implementing posthuman pedagogy faces significant practical, ethical, and structural challenges that require careful interrogation. Among the most immediate obstacles is the pervasive institutional resistance embedded in educational systems that are still largely governed by anthropocentric, industrial-age paradigms. These systems prioritize human cognition, standardization, and measurable outcomes, thereby rendering multispecies and posthuman approaches difficult to meaningfully integrate within existing curricular and policy frameworks (Simmonds; Bekker et al.).

Further, there exist deep-seated regulatory constraints and liability concerns that often inhibit the inclusion of nonhuman beings and nontraditional learning environments in formal education. Issues such as student safety, legal accountability, and institutional risk aversion limit the scope for implementing outdoor, multispecies, or experiential models of learning. These constraints are compounded by a lack of teacher preparation and professional development in posthuman theory, multispecies ethics, and ecocentric learning methods. Many educators remain unfamiliar with the conceptual tools necessary to operationalize these frameworks, leading to a pedagogical gap between theory and practice.

Moreover, critical scholars have cautioned against the romanticization of posthuman relationships and rewilding processes without a thorough engagement with underlying power dynamics and historical injustices (Sitka-Sage et al.; Vass). Educational rewilding, for instance, while noble in its intentions, can risk perpetuating colonial relationships with land, nature, and Indigenous knowledge systems if implemented uncritically. Such approaches may inadvertently appropriate Indigenous ecological

wisdom without acknowledging the histories of dispossession and resistance that inform these traditions. Therefore, rewilding must be situated within a decolonial framework that respects Indigenous sovereignty, epistemologies, and relational ontologies (Sitka-Sage et al.).

Similarly, multispecies education must grapple with complex ethical issues around nonhuman consent, agency, and welfare. While integrating animals into educational spaces—such as through therapy programs or garden-based learning—can promote empathy and ecological awareness, these initiatives must be designed with a clear focus on the well-being and autonomy of the animals involved. Without this attentiveness, there is a danger of reproducing instrumental relationships in which nonhuman beings are used as pedagogical tools rather than being recognized as co-learners and sentient participants (Copeland et al.).

A further consideration involves the challenge of scaling posthuman pedagogical practices beyond isolated or experimental contexts while retaining their transformative potential. Questions persist about how such approaches can be embedded into mainstream education systems without being co-opted or diluted. Addressing this challenge necessitates strategic thinking around curriculum reform, policy adaptation, institutional restructuring, and resource allocation (Bekker et al.). Adequate investment in teacher training, interdisciplinary collaboration, and infrastructural support will be essential for creating environments conducive to posthuman education.

The move toward posthuman and multispecies pedagogies requires not only conceptual innovation but also systemic transformation. These approaches must navigate institutional barriers, ethical dilemmas, and historical legacies with care and criticality. By doing so, educators and scholars can foster educational spaces that are not only inclusive and just but also ecologically resilient and attuned to the complex interdependencies of life.

Discussion

As posthuman pedagogy continues to gain traction within educational theory and practice, future research must engage in the deliberate construction of methodologies that are attuned to the relational, multisensory, and more-than-human dimensions of learning. Traditional methods of educational research—rooted in human-centered paradigms and quantifiable outcomes—are insufficient to capture the complexities of multispecies learning processes (Meijer) that emerge in entangled educational environments. Therefore, there is an urgent need to develop methodological innovations that are qualitative, participatory, relational, and ecologically embedded (Khan and Bowen). Such methodologies may include ethnographies of interspecies interaction, sensory-based assessments, eco-phenomenological approaches, and arts-based inquiry that foreground the affective and material dimensions of learning.

Moreover, evaluating the effectiveness and transformative potential of educational rewilding requires long-term, context-sensitive research that considers not only academic outcomes but also ecological literacy, interspecies empathy, local biodiversity, and learners' relational capacities. Documenting innovative practices across diverse geographical, cultural, and socio-political contexts will be essential to understanding how posthuman pedagogy is translated, adapted, and sustained in real-world settings. Particular attention must be given to how these practices intersect with Indigenous knowledge systems, decolonial approaches, and principles of environmental justice, ensuring that posthuman education does not replicate extractive or exclusionary epistemologies under the guise of innovation (Simmonds).

In parallel, teacher education and professional development must undergo substantial transformation to support the ontological and epistemological shifts required by posthuman pedagogical practices. This includes not only equipping educators with the conceptual tools to understand posthuman theory but also providing experiential training in multispecies engagement, ecological sensitivity, and ethical decision-making. Workshops, collaborative field experiences, and interspecies curriculum design labs can

play a role in fostering new pedagogical dispositions that embrace complexity, relationality, and humility in the face of more-than-human agency.

Realizing the potential of entangled learning on a broader scale will also necessitate fundamental changes in educational policy, institutional architecture, and funding priorities (Cremin). Policies must shift away from rigid metrics and accountability models that marginalize ecological and ethical considerations, toward frameworks that value sustainability, reciprocity, and planetary well-being. Developing alternative indicators of educational quality that incorporate ecological resilience, intergenerational equity, and community well-being alongside cognitive achievement is vital for legitimizing posthuman approaches in policy discourse (Khan and Bowen).

Furthermore, cross-sectoral partnerships between educational institutions, environmental organizations, Indigenous communities, and civic groups will be critical to embedding posthuman pedagogical innovation in diverse learning ecologies. These collaborations can facilitate resource sharing, contextual grounding, and reciprocal learning that strengthens the social and ecological relevance of educational practices. Community-engaged scholarship and place-based initiatives that draw on local ecologies and knowledge systems can serve as powerful models for grounding posthuman pedagogy in lived realities.

Conclusion

Entangled learning through posthuman pedagogy and educational rewilding represents a paradigmatic reconfiguration of education in response to the urgent socio-ecological conditions of the Anthropocene. By decentering the human and embracing the agency, intelligence, and sentience of more-than-human entities, this approach fosters pedagogical imaginaries that are ecologically attuned, ethically grounded, and responsive to the interdependencies that characterize our shared planetary existence. This reconceptualization moves education beyond narrow cognitive development and anthropocentric knowledge production, toward a multispecies ethics of care, co-existence,

and co-flourishing. It opens new avenues for cultivating ecological consciousness, relational accountability, and collective responsibility among learners of all ages. At its core, posthuman pedagogy seeks to nurture new subjectivities and solidarities—not only across human differences but also across species, ecosystems, and temporalities.

However, the successful implementation of such transformative pedagogies will require sustained attention to the political, institutional, and epistemic obstacles that currently delimit their reach. Structural reforms in policy, investment in teacher preparation, ethical protocols for multispecies engagement, and decolonial frameworks for land and knowledge must be central to any attempt at mainstreaming posthuman education. Nonetheless, the growing corpus of theoretical scholarship and experimental practices in posthuman education provides a rich foundation for envisioning and enacting alternative futures. These practices illustrate that education, when disentangled from extractivist logics and reimagined as a relational, multispecies process, can become a potent force for ecological justice and collective healing.

Ultimately, the future of posthuman pedagogy depends on ongoing collaboration across disciplines, species, communities, and ways of knowing. By engaging in this collective project, educators, scholars, and learners can co-create educational paradigms that are not only intellectually generative but also life-affirming—adequate to the complexity, precarity, and possibility of our entangled world.

Author Bio

Dr. Shisira Bania is serving as a Lecturer in Education at Birmaharajpur College, affiliated with Rajendra University, Odisha. He holds an M.A. in Education from Sambalpur University; M.A.s in Sociology and Philosophy from IGNOU, New Delhi; M.A. in English from Odisha State Open University; and M.Phil. and Ph.D. in Education from Dr. P.M. Institute of Advanced Study in Education, Sambalpur University, Odisha. He has presented papers in national and international

seminars, authored two books, and published 18 papers. His research focuses on educational philosophy, sociology, and privatisation.

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