



Integration of Indigenous Tribal Knowledge into School Curriculum – Importance and Challenges

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ABSTRACT

This research explores integrating Indigenous tribal knowledge into the Indian school curriculum, focusing on vernacular knowledge systems. By incorporating indigenous languages, cultural wisdom, and traditional practices, the curriculum can better serve tribal students' unique educational and cultural needs, preserve their heritage while foster educational inclusivity. Indian educational policies, including the National Education Policy (NEP) 2020, advocate including local and indigenous knowledge to promote holistic education. However, systemic barriers make implementing these policies challenging in practice. Using secondary data, this study critically examines how Indian policies and current educational frameworks address the needs of tribal students. The findings highlight key challenges, including resistance to systemic change in the education sector, limited resources, and the ongoing tension between curriculum standardisation and the need for culturally relevant content. Despite these challenges, integrating indigenous knowledge is crucial to fostering cultural pride, improving student outcomes, and promoting environmental stewardship. Drawing on existing research and case studies from across India, this study underscores the importance of collaboration between educational institutions, policymakers, and tribal communities to create a curriculum

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that is both academically rigorous and culturally relevant. By emphasising community involvement, the study advocates for a curriculum that not only enhances students' academic performance but also strengthens their cultural identity and environmental consciousness, contributing to a more inclusive and diverse education system.

Introduction

Indigenous traditional knowledge (ITK), also known as indigenous tribal knowledge, is a collective term for a broad and comprehensive body of knowledge, customs, and traditions gathered and transmitted over centuries within indigenous communities (Agrawal, A., 1995). It plays a unique role in indigenous people's identity and survival and is deeply rooted in their communities, culture, and surroundings. Indigenous knowledge reflects diverse cultural backgrounds in the classroom and can improve its interpretation (Botha, 2012), making science more relatable to students from diverse cultural backgrounds (Zidny et al., 2020).

Indigenous Tribal Knowledge (ITK) is the body of wisdom tribal communities have built over generations: their culture, ways of caring for the land, and traditions they hand down. It shapes how they see the world. At its heart is a close relationship with nature that guides how communities use resources, protect their land, care for local ecosystems, and support the health of both people and place. Most of this knowledge is passed down by word of mouth, and elders are central to keeping it alive. They hold the stories, skills, and customs that connect one generation to the next. ITK also preserves Indigenous arts, crafts, and practices, strengthening a shared sense of identity that has endured for centuries.

In our increasingly globalised world, culture and traditional knowledge remain significant. These are valuable sources of learning that give unique insights into natural worlds, cultural and linguistic identity and sustainable living. The present era also recognises the importance of indigenous tribal knowledge in the mainstream education system to promote the nation's sustainable development.

National Education Policy 2020 emphasised the inclusion of indigenous knowledge into the formal education system; this encompasses diverse fields such as Ayurveda, Yoga, Indigenous science and local arts and crafts, with the approach of curriculum enhancement, a multidisciplinary approach, Local and indigenous languages, and research and documentation for the preservation of traditional knowledge. This fosters a well-rounded and culturally aware society. It also helps bridge the gap between formal education and informal indigenous knowledge, passed down through generations. In India, the concept of culturally appropriate education emerged vaguely during the independence movement in the early 1920s and 1930s,



when Mahatma Gandhi wanted to replace the British education system known as the Macaulay Education System with basic education that incorporates local knowledge and skills (Khubchandani, 2000; Singh 2011). The National Policy on Education (1986) recognised the need for culture-based education. Hence, education's role in developing democratic citizenship leads to democratic thinking and cosmopolitan citizenship. This paper examines what integrating indigenous tribal knowledge means, the curriculum's importance, and its impact on tribal and other students.

Research Objective and Research Methodology

This study aims to investigate the role and benefits of integrating indigenous tribal knowledge into the Indian school curriculum. This integration is seen as a way to improve student outcomes, preserve cultural heritage, and foster environmental stewardship. By embedding indigenous knowledge in educational frameworks, the study aims to show how it can deepen students' connections to their cultural roots while promoting a holistic understanding of sustainability and local ecosystems. Ultimately, the study highlights indigenous knowledge as a valuable learning component that can enrich students' educational experiences and align with India's diverse cultural context.

To meet this objective, the study addresses several key research questions. First, it explores how the school curriculum currently represents indigenous tribal knowledge. It also investigates the specific benefits of including indigenous knowledge in education, particularly cultural preservation, environmental awareness, and academic engagement. Finally, the study examines the challenges of integrating indigenous knowledge into the education system, including curriculum design, teacher training, and community involvement. These questions aim to uncover both the potential and the obstacles in embedding indigenous knowledge within mainstream education.

The study adopts a secondary data analysis approach, utilising content analysis as its primary methodology. The study analyses policy documents, organisational reports, and existing research on indigenous education to identify patterns, challenges, and potential solutions. This qualitative method enables a comprehensive examination of the collected documents, allowing a systematic assessment of how educational policies and frameworks currently incorporate indigenous knowledge. By examining these sources, the study seeks to develop insights that could guide curriculum reforms, support inclusive education practices, and contribute to the ongoing efforts to make the Indian education system more culturally responsive and sustainable.

Need for a tribal indigenous knowledge-based curriculum



In education, tribal communities face many challenges; the biggest is language. Tribal students may not know the teacher's language, and teachers may not speak the children's language. Irrelevant textbook content, context, and language create a gap in tribal students' learning. They have their own language and dialect, which differ from the mainstream; when they enter the mainstream, they hear the state language, which feels foreign to them (Panda M.). Every child has their beliefs, language, background, experience and thoughts, but in school, teachers do not allow them to use their experience, beliefs, and language, which causes fear in tribal students, and they choose to drop out. They are forced to adopt the dominant language, and it becomes difficult for students to sustain themselves in it.

The UN (2015) integrated all educational forms into a single circle and framed the goal to "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all." The SDG4 aspirations offer opportunities to integrate all educational designs, from pre-primary through higher education, including adult and vocational education, into a single framework, whether formal, non-formal, or informal. (Dr Parimal Sarkar and Subhasree Pal, 2022, p. 416). Tribal people's wonderful past should be left behind entirely, and no plans should be based on their past or present. We have come to the realisation that a polar bear cannot survive in the equatorial region. Then how can indigenous children succeed using foreign teaching that has been allowed to spread for so long after independence? (Dr Parimal Sarkar and Subhasree Pal, 2022, p. 418).

1. **Indigenous Tribal Knowledge** - It encompasses the distinctive knowledge, customs, and practices of indigenous cultures; including tribal indigenous knowledge in the curriculum is crucial. This helps children feel included in school and in their experiences, beliefs, and surroundings (Dr Ajoy Kumar Panda, 2020). It also offers insights into cultural heritage, biodiversity conservation, and sustainable living. When included in the curriculum, students learn more about the natural world and indigenous ways of life. This information promotes respect and admiration for indigenous cultures by helping students appreciate these groups' contributions to society and the environment, supporting SDG 4's vision of inclusive, equitable quality education and lifelong learning (UNESCO, 2015).
2. **Inclusive Pedagogy:** By adopting indigenous tribal knowledge-based pedagogy in the curriculum, ensure instruction is both successful and culturally appropriate. Indigenous tribal knowledge emphasises community engagement, storytelling, and hands-on learning (S.P. & P.S., 2022). It aligns with traditional methods for transmitting Indigenous knowledge across generations. This method encourages critical thinking and problem-solving, as well as student engagement. It values the various ways in which information is conveyed and acknowledges the value of oral traditions (Khubchandani, 2008).



3. **Inclusive Education** – Regardless of student background, inclusive education seeks to provide equal learning opportunities for all (SDG 4). By recognising the special needs of indigenous children and incorporating tribal traditional knowledge into the school curriculum, it promotes inclusivity and environmental responsibility. It creates a classroom setting where native students can see their culture and experiences represented in the curriculum. Additionally, it prevents native students from being marginalised and ensures their viewpoints are respected.
4. **Quality Education for all** – A quality education prepares students to be responsible, knowledgeable citizens while also emphasising academic success. Including a curriculum based on tribal indigenous knowledge enhances education quality by offering a more thorough understanding of the world. It teaches pupils about sustainability, environmental responsibility, and cultural diversity alongside regular courses. Pal and Sarkar (2022) argued that education includes skill efficiency and knowledge, along with metacognition; the curriculum should link to the voice economy, entrepreneurship, and indigenous knowledge, align with a holistic curriculum, and launch with children's language.
5. **Cultural Preservation** – Preserving cultural heritage depends on including indigenous tribal knowledge (Singh and Reyhner). Numerous indigenous groups have distinct customs, dialects and ways of life that are essential to who they are. Integrating indigenous knowledge into academic programs ensures these cultural components are recognised, valued, and transmitted to future generations. It helps preserve the cultural diversity of indigenous tribes and helps prevent the decline of traditional practices. This preservation strengthens these communities' pride, cultural identity, and essential ties to their origins (Zidny et al., 2020).
6. **Promoting Diversity** - Including indigenous tribal knowledge in the curriculum encourages inclusivity and diversity. Students are exposed to a wide variety of viewpoints, worldviews, and lifestyles (UNESCO, 2015). By challenging myths and preconceptions, this exposure promotes a more welcoming, inclusive culture. Pupils gain an appreciation for the significance of many customs and civilisations, which can increase their sensitivity to cultural differences and respect for variety. This knowledge is essential in today's globalised society to foster peaceful interactions between individuals from different origins.
7. **Recognition and Validation** - Indigenous groups have historically been marginalised and disenfranchised as a result of the absence of tribal education and expertise from mainstream educational institutions. Including Indigenous knowledge in the curriculum attests to its significance. It recognises the value and applicability of indigenous wisdom as equal to other forms of knowledge (May, S., &



Aikman, S., 2003). When the educational system values and celebrates their cultural history, this recognition helps indigenous kids feel part of the school community.

8. **Community Collaboration** - When creating a curriculum that incorporates Indigenous tribal knowledge, elders, knowledge keepers, and community members must actively participate. Working together ensures that knowledge is not just taken from the community but co-created with their permission and active participation. Giving Indigenous populations a voice in content and instructional methods improves the curriculum's relevance and efficiency. It also strengthens the integration process by building trust and a sense of ownership among Indigenous peoples.

Therefore, integrating tribal traditional knowledge into the curriculum is a crucial way to enhance education for all students. It enhances the curriculum by incorporating inclusivity, diversity, and cultural relevance. Additionally, it improves education quality by preparing students to be informed, accountable, and caring global citizens. Most tribal children could not understand the textbooks because they were written in the local tongue (Gautham 2003 & Singh & Reyhner). This is a good start toward righting historical wrongs and ensuring that indigenous knowledge is valued and preserved in the contemporary educational system.

Impacts and benefits of indigenous tribal knowledge-based curriculum

An indigenous tribal knowledge-based curriculum has important and varied effects on student participation and classroom engagement. These effects include:

1. **Cultural Relevance** - When the curriculum incorporates indigenous knowledge, it becomes relevant to indigenous students' cultures. Seeing their culture, customs, and life experiences reflected in the classroom piques their curiosity and motivates them to participate actively (SDG4).
2. **Enhanced Learning** - Indigenous knowledge frequently includes useful information about the regional climate, customs, and values. Students may become more engaged when they apply this knowledge to their learning, as it helps them better understand their environment (S.P. & P.A., 2022).
3. **Community Connection** - Including community members, knowledge keepers, and local elders in curriculum development and teaching helps create a sense of community when students receive instruction from reputable members of the community (McKinley Jones Brayboy, B., Faircloth, S. C., Lee, T. S., Maaka, M. J., & Richardson, T. A., 2015).
4. **Practical Learning** - Through experience and hands-on action, indigenous knowledge is often transferred. Because students actively participate in traditional activities like gardening, storytelling, and craft-making, this type of learning encourages participation (Paquin, A.).



5. **Multidisciplinary Education** - Indigenous knowledge is comprehensive, encompassing history, science, the environment, and culture, among other facets of life (Richardson, T. A., 2015). This interdisciplinary approach can pique students' curiosity and engagement as they recognise links across many courses.
6. **Cultural Pride** - Teaching children about their own culture and background in the classroom can help them feel more confident and prouder of who they are. This self-awareness promotes active engagement in learning (Sarangapani, P. M., 2003).
7. **Critical Thinking** - Applying indigenous knowledge often involves choosing sustainable approaches and solving practical problems. This can encourage the development of critical thinking abilities and engaged involvement in conversations and projects (Sarangapani, P. M., 2003).
8. **Environmental Stewardship** - Indigenous wisdom frequently reflects a deep relationship with the environment and the land. Teaching students about this relationship and instilling a sense of responsibility for the environment can encourage them to participate in environmental projects.
9. **Inclusivity** - Since an indigenous knowledge-based curriculum values a variety of viewpoints and customs, it encourages inclusivity. Pupils with different cultural origins can interact and share knowledge (UNESCO).
10. **Elder Respect** - Many indigenous cultures highly value respect for elders. Students are more likely to participate actively in class when elders are present because they value their experience and expertise.

Therefore, incorporating Indigenous tribal knowledge into the curriculum improves student participation and classroom engagement while enriching students' educational experience. It fosters a more welcoming, culturally sensitive, and holistic, enriching learning environment that benefits all students.

Challenges

1. **Diverse range of tribal groups** - India has approximately 712 distinct tribal groups. As a result, creating pedagogy based on their worldviews and indigenous knowledge requires significant effort and research. To further define the curriculum, the group should include members of diverse indigenous tribes, which will require cooperation from a variety of stakeholders.
2. **Lack of Access to school** - A significant section of the indigenous population still prioritises child labour over their pursuit of education, despite the many years of independence. Planning two meals a day is more significant than going to school. There aren't nearly enough schools. The lack of infrastructure, skilled teachers, and basic supplies further hampers the provision of high-quality education in schools (Dr Parimal Sarkar and Subhasree Pal, 2022). Each student should feel encouraged and supported by both the instructor and the institution. Many students, especially those from



marginalised communities, do not receive attention from teachers,rom parents, school administrators, and other stakeholders. This causes fear and demotivation in children and can lead them to drop out of school.

3. **Lack of Curriculum and Teaching-Learning Materials** - The primary challenge is the lack of a suitable curriculum and associated learning materials that integrate ITK. This disparity stems from ITK's historical exclusion from formal schooling. It is necessary to create thorough, culturally aware materials and courses. This could involve working together with Indigenous groups to produce content that respects and represents their values and expertise.
4. **Maintaining the Adequate Balance Between Tradition and Modernity** - Balancing Indigenous traditional knowledge with contemporary educational standards can be difficult. Curricula must balance preserving traditional practices with preparing students for the modern world. Maintaining communication and collaboration between educational institutions and Indigenous communities may be necessary for achieving this balance. Gaps in Teacher Knowledge and Training: Teachers may lack the skills needed to implement ITK successfully in their classes. Providing professional development opportunities that give educators the resources needed to offer culturally relevant information can help close this gap. It might be especially beneficial to involve Indigenous elders and knowledge keepers in this training.
5. To meet market expectations, an outdated curriculum needs revision to produce the right human resources. Several parts and courses need to be developed with the service economy in mind. The education sector should receive more government funding to attract more taxpayers. Despite having one of the largest educational systems in the world, we still lack sufficient funding. (Subhasree Pal and Dr Parimal Sarkar, 2022).

Therefore, resolving these issues is essential to effectively implementing ITK in the classroom. This requires moving away from Eurocentric viewpoints, creating relevant materials, training teachers, and carefully considering how tradition and modernity combine. To honour ITK's importance and its purpose of providing a comprehensive, culturally aware education, several initiatives are required.

Synergy Between NEP 2020 and Gandhian Philosophy

The National Education Policy (NEP) 2020 and Gandhian Basic Education complement each other because both prioritise holistic education, emphasising contextual and culturally appropriate learning, personality growth, and vocational skills. Both approaches support an educational system that fosters values, encourages liberty, and meets community needs,while providing knowledge.



Gandhian Basic Education, known as Nai Talim, advocates an educational approach that incorporates life skills and emphasises practical abilities alongside academic knowledge. Gandhi supported the idea of "education for all," emphasising the needs of underserved and rural communities. His method is based on learning by doing, which helps students develop their critical thinking and problem-solving skills. This idea is reflected in NEP 2020, which promotes multidisciplinary approaches, experiential learning, and the early integration of vocational education. This alignment makes education more relevant and useful to students' lives by encouraging them to interact with their surroundings and communities.

One key tenet of both philosophies is the emphasis on the mother tongue as the medium of instruction. Gandhi argued for mother-tongue education to make learning more accessible and meaningful for children. The NEP 2020 similarly prioritises mother tongue-based multilingual education, particularly in early childhood education, promoting linguistic and cultural diversity. This approach not only enhances cognitive development but also strengthens students' connections to their cultural identities.

Moreover, both frameworks recognise the importance of character education. Gandhian Basic Education places a strong emphasis on moral and ethical development, aiming to cultivate values such as truth, non-violence, and respect for all individuals. NEP 2020 also underscores the need for education to foster responsibility and ethical values, helping students grow into compassionate, socially aware citizens. This focus on character development is essential for building a just and equitable society.

Additionally, both Gandhian education framework and NEP 2020 advocate for inclusive education that respects and incorporates diverse cultural backgrounds, particularly for marginalised communities. NEP 2020 seeks to address educational disparities faced by tribal and rural populations and aims to integrate indigenous knowledge into the curriculum. This aligns with Gandhi's vision of education as a means of empowerment and social upliftment, particularly for the underprivileged. Both Gandhian Basic Education and NEP 2020 offer a roadmap for an educational system that nurtures students' minds, bodies, and spirits, empowering them to contribute meaningfully to society.

Conclusion

To sum up, incorporating indigenous tribal knowledge into school curricula is a complex but essential process for maintaining cultural traditions, fostering diversity, and providing a more holistic education. The benefits of enhanced learning outcomes, environmental stewardship, and cultural pride outweigh the drawbacks, including resource constraints and opposition to change. Successful integration requires recognising the need for customisation and the importance of community collaboration. Ultimately, this



process aims to promote a society that honours indigenous knowledge and customs and is more inclusive and courteous.

Incorporating indigenous tribal wisdom into school curricula is a crucial step toward accepting the diversity of human knowledge as we advance in the twenty-first century. This enriches our global community. It is a pathway to a more inclusive, holistic and sustainable future.

References

- Agrawal, A. (1995). Indigenous and scientific knowledge: Some critical comments, *Indigenous Knowledge and Development Monitor*, 5(3), 1–9.
- Ball, J., & Simpkins, M. A. (2004). The community within the child: Integration of indigenous knowledge into First Nations childcare process and practice, *The American Indian Quarterly*, 28(3), 480–498. <https://doi.org/10.1353/aiq.2004.0091>
- Gandhi, M. K. (1951). *Basic Education: A Teacher's Guide*. Sarva Seva Sangh Prakashan.
- Harrington, B. G., & Pavel, D. M. (2013). Using indigenous educational research to transform mainstream education: A guide for P–12 school leaders, *American Journal of Education*, 119(4), 487–511. <https://doi.org/10.1086/670962>
- Karunamay, P. (n.d.). STEM discipline and tribal indigenous knowledge for self-reliant India.
- Karunamay, P. (2023). Integration of tribal indigenous knowledge in curriculum for sustainable development, 11(1).
- Knopf, K. (2023). The turn toward the indigenous: Knowledge systems and practices in the academy.
- Lara-Cooper, K. (2014). Creating a space for indigenous knowledge in the classroom, *Journal of American Indian Education*, 53(1), 3–22. <https://doi.org/10.1353/jaie.2014.a798516>
- May, S., & Aikman, S. (2003). Indigenous education: Addressing current issues and developments, *Comparative Education*, 39(2), 139–145. <https://doi.org/10.1080/03050060302549>
- McKinley Jones Brayboy, B., Faircloth, S. C., Lee, T. S., Maaka, M. J., & Richardson, T. A. (2015). Sovereignty and education: An overview of the unique nature of indigenous education. *Journal of American Indian Education*, 54(1), 1–9. <https://doi.org/10.1353/jaie.2015.a835529>



Ministry of Human Resource Development (MHRD). (2020). National Education Policy 2020. Government of India.

National Education Policy (NEP). (2020). *Department of School Education and Literacy*. Government of India.

Paquin, A. (n.d.). The integration of indigenous knowledge in education.

Pewewardy, C., Lees, W., & Clark-Shim, J. (2018). The transformational indigenous praxis model: Stages for developing critical consciousness in indigenous education. *Wicazo Sa Review*, 33(1), 38. <https://doi.org/10.5749/wicazosareview.33.1.0038>

Protective discrimination: Why scheduled tribes lag behind scheduled castes (2023).

Richardson, T. A. (2015). Indigenous methodologies and educational research for meaningful change: Parsing postpositivist philosophy of science and mixed methods in collaborative research settings, *Journal of American Indian Education*, 54(1), 33–62. <https://doi.org/10.1353/jaie.2015.a835530>

S. P., & Sarkar, P. (2023). Need for incorporation of indigenous values in modern education system, *International Journal for Multidisciplinary Research*, 5(5), 6377. <https://doi.org/10.36948/ijfmr.2023.v05i05.6377>

Sarangapani, P. M. (2003). Indigenising curriculum: Questions posed by Baiga vidya, *Comparative Education*, 39(2), 199–209. <https://doi.org/10.1080/03050060302552>

Sengupta, M. (2015). Obstacles to the use of indigenous knowledge, *Development in Practice*, 25(6), 880–894. <https://doi.org/10.1080/09614524.2015.1064861>

Singh, N. K., & Reyhner, J. (n.d.). Indigenous knowledge and pedagogy for indigenous children.

Subhasree, P., & Sarkar, P. (2022). Quality education & tribes: New approach to attain sustainable development goals, *EPRA International Journal of Multidisciplinary Research (IJMR)*, 5, 416–422. <https://doi.org/10.36713/epra10951>

Zidny, R., Sjöström, J., & Eilks, I. (2020). A multi-perspective reflection on how indigenous knowledge and related ideas can improve science education for sustainability, *Science & Education*, 29(1), 145–185. <https://doi.org/10.1007/s11191-019-00100-x>