

Urban Indigenous Skill Development and Employability through AI-Driven Multilingual Education Systems: A Human Resource and Policy Perspective

T. Gouthami ¹, Dr.D. Ramesh Babu ², Dr. K. Subramani³, Lingala Mounika⁴, Surthi singapuram⁵

¹School of Business SR University, Warangal, India

Email Id: 2402c70012@sru.edu.in ORCID ID: 0009-0009-7160-1499,

²School of Business SR University, Warangal, India

Email Id: rameshbabu@sru.edu.in ORCID ID: 0000-0003-0851-7752,

³Senior professor-Operations, Vignana Jyothi Institute of management
Hyderabad, india

ORCID:ID: 000-0001-9676-2701

⁴Lingala Mounika , Assistant Professor, Vaagdevi Degree and PG college
Warangal, India

Email ID: Mounikalingala05@gmail.com

⁵Surthi singapuram, Assistant Professor, Vaagdevi Degree and PG college
Warangal, India

Email ID: sruthisony44@gmail.com

Corresponding author

T. Gouthami

School of Business SR University, Warangal, India

Email Id: 2402c70012@sru.edu.in ORCID ID: 0009-0009-7160-1499

Abstract: In the recent decades the migration of indigenous communities towards urban areas has risen dramatically as a result of seeking education, jobs and better living standards. Nevertheless, the indigenous youth as they go to urban areas are usually faced with issues of language barrier, lack of skill development programs, cultural displacement, and systemic inequalities in workplace labor markets. Based on Human Resource Development and Educational Policy outlooks, the chapter suggests a Multilingual AI Learning Framework to bring together the indigenous languages (i.e., Gondi, Lambadi, and Koya) with the mainstream academic and workplace languages (Telugu, Hindi and English). The framework will enhance the foundational skill shortages, digital readiness issues, and employability issues among the indigenous learners in urban locations by enabling cultures relevant and linguistically adaptive learning pathways. The paper also discusses how AI-based skill mapping, vocational advice systems, and contextualized language learning systems can be useful in facilitating job opportunities in fields like healthcare, construction, retail, hospitality, and digital services. The methodology of the chapter combines policy review, secondary data analysis, and case evidence in the regions of the Integrated Tribal Development Agency (ITDA) to demonstrate the connection between the access to language, continued education, and workforce inclusion. The policy instruments that are also assessed in the discussion are the National Education Policy (2020) focusing on mother-tongue-based learning, introduction of digital capabilities, and development of competencies, which can play a significant role in reducing educational exclusion, enhancing job readiness, and fostering the preservation of indigenous cultures in urban labour markets. It wraps up by suggesting an implementation framework, which links the five parts of the city, learners of information and communication technologies, educational institutions, and digital learning communities to develop sustainable, equitable and culturally responsive commitment of pathways to indigenous youth employability.

Keywords: Indigenous Youth, Employability, Human Resource Development, ITDA, NEP-2020..

Introduction

In India, urbanization has been accelerated at a high pace leading to massive migration of rural and tribal population to the cities in pursuit of improved livelihood, education and availability of services. The native populations, which were traditionally living in the forests and geographically isolated regions, are becoming more and more engaged into this change. Nonetheless, their incorporation into urban settings is defined by the major cultural, linguistic, and socio-economic issues. The transformation of traditional settlement patterns toward competitive urban labor markets requires adaptive skills, digital literacy, and communication skills most indigenous youth lack the necessary preparation to receive, as they have pervasive structural inequalities in educational access, barriers due to language medium, and their curriculum relevance. The National Education Policy (2020) focuses on mother-tongue-based learning, digital empowerment, and competency-based skill development, which is an important policy framework to provide a critical basis of inclusive education. However, these principles have been applied in a small part in tribal lands. The language barrier between home and institutional language especially in mainstream and urban education and employment systems is one of the most insurmountable impediments in the education of indigenous learners. Multilingual educational systems based on Artificial Intelligence (AI) manifested as a new chance to overcome these difficulties. In the translation tools, speech to text applications, the adaptive learning systems and the personalized skill-training modules that are AI-enhanced can help indigenous students and youths, as they prepare to join the urban employment spaces, have the culturally aware and language responsive learning experiences. The chapter is centered on the way such AI-based multilingual systems can be used to improve the employability of indigenous populations, especially those who migrate to urban areas (Warangal, Hyderabad, Karimnagar, and Khammam) after leaving Integrated Tribal Development Agency (ITDA) territories of Telangana. It is based on the human resources development (HRD) and educational administration approaches and suggests the systematic framework that comprises skill mapping, vocational training, language bridging, and digital literacy support, thus aligning the cultural identity of the indigenous community with the modern urban labor demands.

1. Urban Migration and Indigenous Education Challenges

Historically, the Indian indigenous communities have been marginalized, geographically, through isolation, lower access to institutions and absence of culturally relevant education systems. Tribal communities like Gondi, Koya, Lambadi (Banjara), Kolam and Thoti still face various forms of exclusionary barriers in terms of continuity in education, infrastructure difference and as well as internal inequality in skill based labour.

1.1 Drivers of Urban Migration

The reasons why the indigenous youth move to cities are mainly: Higher education ambition. Long term or seasonal wage labor opportunities. Forest land acquisition, environmental degradation and development projects displacement. Search: Socio-economic mobility

Urban Indigenous Skill Development and Employability through AI-Driven Multilingual Education Systems: A Human Resource and Policy Perspective

Table 1 Key Barriers in Urban Education Pathways

Challenge	Description	Impact
Language Barriers	Home languages differ from school/urban languages	Poor comprehension, low confidence, academic dropout
Curriculum Irrelevance	Standard curriculum lacks indigenous cultural context	Reduced engagement and identity dissonance
Limited Digital Literacy	Unequal access to digital devices and skills	Weak competitiveness in job markets
Economic Constraints	Low income limits access to quality institutions and training	Reinforces generational poverty
Cultural Isolation	Urban spaces lack familiarity and social support	Psychological stress and identity erosion

All these obstacles contribute to the increasing difference between indigenous students and the labor market demands in the cities. **Consequences for Employability** Minimal inclusion on formal employment arenas. Informal, unskilled, low-wage labor is concentrated very highly. Failure to acknowledge native knowledge and useful skills. Low career growth and career security. Hence, closing the language and ability is not only an educational need, but it is also a human growth need.

2. Conceptual Framework: AI-Based Multilingual Education System

Designing the model of inclusive education among indigenous youth demands a methodology that would focus on the aspects of linguistic accessibility, cultural relevance, and skill acquisition altogether. The suggested conceptual framework holds Artificial Intelligence (AI) as an intermediary to the native language context and the linguistic requirements of urban education and job markets.

2.1 Multilingual Learning as a Foundation for Inclusivity

Language is a core in identity building, expression of the world view and development of thinking. In educational settings that incorporate Telugu, Hindi, or English as their major languages of instruction, the mainstream, indigenous students who speak Gondi, Lambadi, Koya, Kolami, and others may find it very challenging. A bilingual learning system: Encourages understanding provided by mother-tongue access of instruction. Takes away student fear and enthusiasm. Enhances cultural belonging and stimulates the learning of new language.

2.2 Role of Artificial Intelligence in Language Bridging

Table 2 Multilingual learning can be facilitated by AI tools in the following ways:

AI Function	Application in Indigenous Learning	Outcome
Speech-to-Text & Text-to-Speech	Local language lesson narration and feedback	Easier conceptual understanding
Machine Translation Systems	Real-time translate between indigenous languages and English/Telugu	Reduced language barrier
Adaptive Learning Platforms	Personalized learning based on student pace	Higher retention and progression
Predictive Skill Mapping	Identifying skill strengths and interests	Better vocational alignment
AI Chatbot-Assisted Mentoring	Navigating education, jobs, and city life	Emotional and informational support

2.3 Cultural Responsiveness in AI-Driven Systems

In order to prevent extraction of foreign cultural hegemony, AI learning models should include the native language, narratives and setting. Maintain the oral knowledge systems and wisdom of the community. Be co-developed with local teachers and leaders.

2.4 Technological and Institutional Readiness

To implement it, there should be cooperation between: ITDA schools and hostels, Centres of development of urban skills, Universities and Teacher Training Colleges, Local government and local organizations.

2.5 The Framework in Summary

The Multilingual Education System AI-Based has three fundamental pillars:

- 1. Language Accessibility:** Making sure that there is understanding and trusting by use of mother tongue.
- 2. Skill Development:** This is facilitating organized vocation and employability-driven studies.
- 3. Cultural Vitality:** Keeping the touch with the indigenous identity and allowing adaptation in the city. This combined model is the basis of enhancing the employability in relation to indigenous youth in urban settings.

3. Human Resource and Employability Needs Among Indigenous Youth

The complex interaction of educational preparation, cultural adaptation, and acquisition of skills and demands of the labor market is the factor that determines the employability of the indigenous youth in the urban settings. Although indigenous peoples have a rich traditional knowledge, artisanal skills and ecological intelligence, such skills are not adequately recognized or appreciated in urban economic frameworks. Hence, to meet the contemporary employment needs and requirements by aligning the strengths of the indigenous people, a dedicated Human Resource Development (HRD) is needed.

3.1 Skills Required in Urban Labor Markets

Urban Indigenous Skill Development and Employability through AI-Driven Multilingual Education Systems: A Human Resource and Policy Perspective

Employment sectors in the city are focusing more on: Teamwork skills (especially in English and /or regional languages) Computer and basic literacy in digital form. Technical and professional (trade and service based) skills. The soft skills which include teamwork, punctuality, flexibility as well as workplace etiquette. Competencies in problem-solving and decision-making. These areas often pose a challenge to native youth because of systemic and historical disparities in education instead of deficit in talent or capacity.

3.2 Existing Skill Strengths Among Indigenous Youth

Nevertheless, indigenous youth have good natural competencies that can be transferred to the modern labor market in spite of structural barriers:

Table 3. Structural Barriers

Indigenous Strength	Urban Relevance
High environmental awareness and resource management	Green economy, forestry, sustainable agriculture, eco-tourism
Craftsmanship and artisanal knowledge (weaving, bamboo work, metal craft)	Handicraft markets, cultural industries, creative economies
Collective decision-making and community cooperation	Teamwork and participatory leadership
Physical endurance and adaptability	Construction, logistics, defense assistant roles, field operations

All these, however, need to be formally acknowledged, credentialed and connected to the market in order to become the stable work.

3.3 Barriers in Current HR and Employability Systems

In the majority of the urban areas the HR recruitment framework is influenced by: Licensed qualification standards. Oral interview: Formal communication-based interview. The digital application systems. Competitive-assessment based on training. Such processes are based on previous exposure to: Urban learning environment. Digital interfaces Standard norms of communication linguistically. To most indigenous youths, the transition into such systems is hardly achieved because of: **Absence of professional vocational advice. The lack of digital infrastructure in distant schools. Little exposure to workplace culture. Lack of a mentor within the city or the city support system.**

3.4 The Need for an Inclusive HR Development Approach :A more fair HR structure must:

Identify community based experiential learning. Training in local + regional + English language. Implement new AI-based career advice. Make bridge programs between ITDA educational institutions and urban employers. Promote industry alliances in regards to apprenticeships and sponsorships. In this regard, AI-based multilingual education will be placed not as an academic intervention, but as a strategic HR solution to: Improving work preparation. Promoting urban social integration. Indigenous identity being retained and professional mobility being made possible.

4. Role of NEP 2020 and Policy Landscape Supporting Indigenous Skill Development

National Education Policy (NEP) 2020 has brought a new transformative model of education with the focus on inclusivity, learning in more than one language, integration of technology, skill based learning. It is an important policy to native people since it is now a formally stated policy that linguistic and cultural diversity of India exists and that education systems should be reorganized to cater to the needs of learners who belong to historically marginalized communities. The policy is in line with the goals of improving employability among the indigenous youth using a mixture of mother-tongue education, vocational education, and digital inclusion.

4.1 NEP 2020 on Mother-Tongue and Multilingual Education

NEP 2020 dwells on the fact that in their home language, a child is able to comprehend, develop cognitively, and gain confidence in their academic performance. This is essential to the native students who tend to join schools where the language of instruction is either Telugu, Hindi or English. Key provisions include: Mother tongue/ Regional language, primary education. Bilingual and multilingual materials in teaching. Favorability towards the digital creation of local language material. These values are perfectly in line with the marketing of AI-based multilingual education models where translation, interpretation, and adaptive linguistics assistance occurs.

4.2 Skill Development and Vocational Education under NEP

NEP 2020 offers the idea that vocational education should be introduced into the school and college programs, starting at the early levels. The policy encourages: Introduction to a variety of occupational arts. Partnership with local producers and community knowledgeable persons. Various other skills laboratories in the rural and tribal regions. Adaptation of the National Skills Qualification Framework (NSQF). This comes directly in line with the employability requirements of indigenous youth whereby the traditional knowledge systems can be connected to green economy, eco-tourism, modernization of agriculture, handicrafts, and community resource management.

4.3 Digital Education and Technology Inclusion NEP 2020 is a firm advocate of education based on technology, which is achieved by: Digital Infrastructure of Knowledge Sharing (DIKSHA) platform. e-Content Multilingual- Indian language e-Content. Adaptive learning ecosystems based on AI. Virtue and blended learning paradigms. There are however practical limitations to implementation in ITDA regions which include: Poor internet connectivity. Lack of the necessary availability of devices. Insufficient trained online instructors. The mentioned challenges demonstrate the necessity of AI systems that are offline accessible, can be used with low bandwidth, and with a localized interface design.

4.4 Tribal-Focused Educational and Skill Development Schemes

There are a number of national and state-based programs that facilitate tribal education and employment and these include: Eklavya Model Residential Schools (EMRS). So-called Tribal Sub-Plan (TSP) allocations. Integrated Tribal Development Agencies (ITDAs). Skill India Mission PMKVY (PM Kaushal Vikas Yojana). Telangana Aasara and Kalyana Lakshmi schemes of social empowerment. However, there are still some loopholes in terms of integrating school education and training centers and industry placement.

4.5 Policy Gap and Opportunity

NEP 2020 offers a very solid ideological framework, but there is an urgent necessity to use implementation models that combine AI, tribal languages, cultural content, and employability pathways. The chapter fills that gap by suggesting a useful AI-Driven Multilingual Vocational Learning

Urban Indigenous Skill Development and Employability through AI-Driven Multilingual Education Systems: A Human Resource and Policy Perspective

Model specifically in tribal-to-urban transition.

5. AI-Driven Multilingual Vocational Learning Model

The AI-based Multilingual Vocational Learning Model suggested in this chapter aims at linking aboriginal learning identities and urban employability needs by a coordinated and culturally based learning process. The model puts at the core of its priorities language access and digital inclusion and skill certification so that youth of indigenous background may enter the urban education and employment spheres without lingo and cultural estrangement.

The model has four interrelated layers:

1. **Bridging and Multilingual Learning.**
2. **Professional Skill Training and Competency Development.**
3. **Online and Employability Literacy.**
4. **Placement, Mentorship and Urban Transition Support.**

The AI-enabled tools and mechanisms of participation in the community support each layer.

Layer 1: Language Bridging and Multilingual Learning

Eliminating language barriers to restrain the engagement of indigenous students in academic and working environments is the initial and the most essential step to be undertaken.

AI Tools UsedGondi, Koya, Lambadi as well as Telugu have speech-to-text and text-to-speech modules.Local dialect based machine translators.Adaptive word learning applications having culturally contextual vocabulary.

Outcomes:Understanding in the classroom.Increased communication confidence.Less secondary and higher education dropouts.

Layer 2: Vocational Skill Training and Competency Development

It is based on local strengths + urban market needs, which Skill development modules are developed.

Table 4: Training Domains Include

Sector	Skills Offered
Handicrafts&Artisanal Work	Bamboo craft, weaving, embroidery
Agriculture&GreenEconomy	Sustainable farming, nursery management
Hospitality and Retail	Customer interaction, service operations
Construction&Technical Trades	Masonry, carpentry, welding
Digital Services	Data entry, e-commerce support, mobile repair

AI Components: Skill mapping algorithm to detect aptitude Virtual practice simulation on applied learning.Individual learning advancement boards.

Layer 3: Digital & Employability LiteracyThis layer guarantees that young people are able to

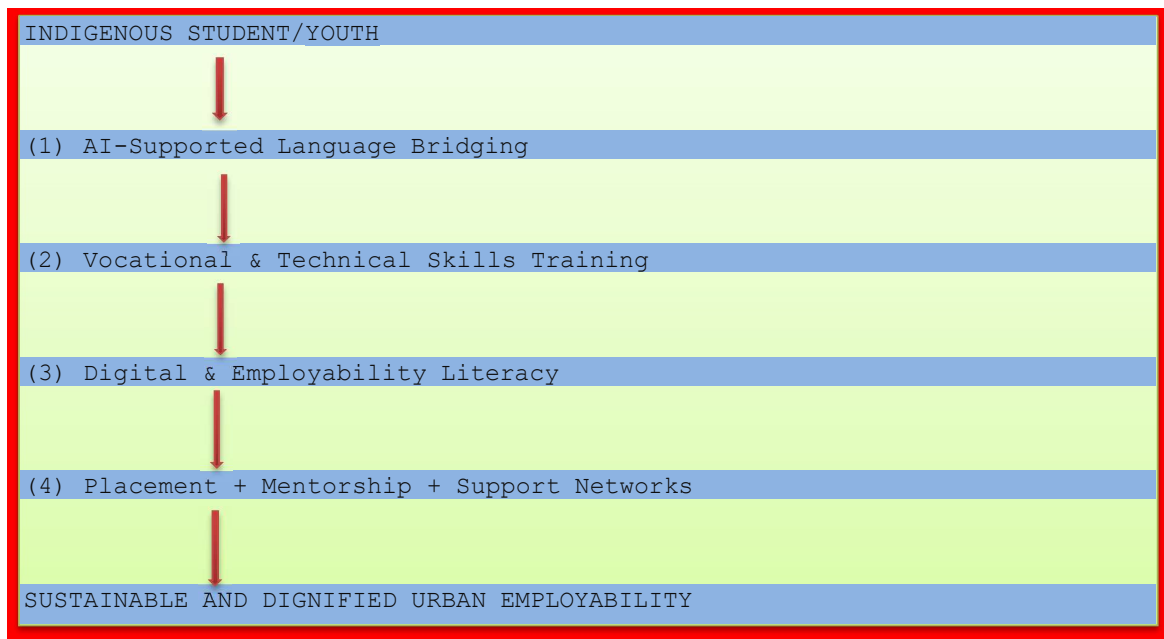
contribute constructively to electronic job hunt, city manner of communication and work anticipations.

Modules Include : Individual computer literacy and mobile application skills. Online filling of forms, emailing, etiquette of communication with workforce. AI conversational bots interview preparation. Employment ethics and interpersonal cooperation training. This layer is certain to provide confidence-building and flexibility in urban professional settings.

Layer 4: Placement, Mentorship, and Transition Support Migration requires a transition framework that will prevent isolation and discontinuity. **Provisions Include :** Mentorship networks that are conducted by peers. Urban tribal support cells, Apprenticeship tie-ups in the industry. Placement with MSMEs, retail chain, hospitals and service organizations. Community employment groups of the cultural industries.

AI Role : Anticipative job-matching recommender system. Career guidance chatbot: Chatbot to get around the opportunities. Follow-ups of success and welfare in employment transition.

Framework Summary Diagram



Through the model, identity retention + economic mobility is achieved without necessarily entailing cultural assimilation.

6. Case Evidence from ITDA Telangana

In order to reveal the topicality and the possibility of the AI-driven Multilingual Vocational Learning Model, this section reviews the case evidence of major Tribal Development Agency (ITDA) areas in Telangana, such as Warangal (Eturunagaram), Utnoor (Adilabad) and Bhadrachalam (Bhadrachalam-Kothagudem). The area boasts of sizeable indigenous communities such as the Gondi, Koya, and Lambadi (Banjara) communities that are shifting towards urban areas more often to get an education and work.

6.1 Educational Landscape in ITDA Regions Nevertheless, despite the several state and central interventions, there are still problems: Schools tend to have teachers who do not know the indigenous languages. Native dialects have little access to learning materials. Digital

Urban Indigenous Skill Development and Employability through AI-Driven Multilingual Education Systems: A Human Resource and Policy Perspective

infrastructure is incomplete and not frequently used. Students find it hard to adjust to colleges in Warangal, Karimnagar, Hyderabad, or Khammam as there is language barrier.

Observation: Learners experiencing the introduction of basic courses in indigenous languages at an early age demonstrate higher literacy, understanding, memory, and assurance.

6.2 Vocational Skill Development Programs: Current Strengths A number of skill programs have already been established in these areas:

Table 5: Skill Program

Program/Institute	Key Focus	Outcome
EMRS (Eklavya Model Residential Schools)	Holistic education for tribal students	Improves academic exposure
Gurukulam / Ashram Schools	Basic education with hostel facilities	Ensures educational continuity
ITDA Skill Training Centres	Craft, agriculture, small machinery	Supports local livelihood
PMKVY Training Hubs	National skill certification	Enables employability credentials

Gap: These programs continue to be based on Telugu or English and many learners are still linguistically out of touch.

6.3 Youth Migration Patterns and Urban Challenges An increasing number of tribal young people in these areas of ITDA move to: The intermediate and degree colleges are covered by Warangal (for intermediate colleges). Hyderabad (in case of the private sector jobs). Karimnagar, Khammam (to fill vacancies in the vocational and service sectors). The major challenges related are: Feeling of barrier in communication in college classes. Minimal access to electronic processes. Hesitation may be due to cultural unfamiliarity in social and workplace interaction. Underconfidence in the interview and selection. This substantiates the necessity of language responsive pre-migration training.

6.4 Community Strengths Supporting AI-Based Learning The traditions of the indigenous communities include: Verbal storytelling and common learning. Collective decision-making. Experience, practical education. Traditional and environmental knowledge heritage. These strengths are compatible with: Voice-based AI interfaces, Vocational modules (visual and practice), visual. Peer mentorship models. It implies that AI-based multilingual learning is not an outsider- it is also fully compatible with the patterns of cultural learning. **This means AI-driven multilingual learning is not foreign—it is compatible with existing cultural learning patterns.**

6.5 Case Insight Summary: ITDA Telangana has evidence that indicates: The native young people are ambitious and goal-oriented. Systemic language obstacles restrict their complete involvement. Such skill training programs are available but need language and digital bridging. Multilingual systems based on AI develop a culture-respecting, pragmatic, and scalable solution.

7. Implementation Roadmap for Urban Skill Hubs & Digital Learning Ecosystems

The proposed AI-Driven Multilingual Vocational Learning Model needs to be transferred to the actual practice, which should be done through a structured implementation roadmap. The aim of this roadmap is to be adopted by institutions of ITDA, institutions of higher education, community organizations, and even the industry partners so that indigenous learners are assisted in their process of relocation between the rural/tribal areas to the urban employment scenario

Establishment of AI-Enabled Multilingual Learning Resource Centers These centers are to be situated in: ITDA Schools and Hostels, Junior Colleges/ Degree Colleges which have tribal students. Urban Skill Preparation and Employment Centres.

Core Functions established to Provide mother-tongue + Telugu/English bilingual education. Give AI translation services via speech. Have digital literacy laboratories with offline accessible resources. e outreach centers of urban education and employment preparation.

Developing Localized Digital Learning Content The artificial intelligence systems should be trained to accept regional accents and cultural reference-systems.

Content are Story based modules based on tribal oral traditions. Visual concept learning and activity based concept learning. Vocational micro-courses, which are related to local job markets. Audio-based instructions: low-literacy learners.

Collaboration Team Elders of the indigenous community (cultural knowledge). Local instructors (instructional linkages), Linguists (dialect mapping), AI developers (integration technology

Table 6 Connecting Tribal Regions to Urban Employers

Stage	Key Action	Stakeholders
PreTraining	Language & confidence building	Schools, NGOs
CoreTraining	Vocational certification + digital literacy	Skill India, ITDA
Placement	Job matching, interview readiness	Industry partners
PostPlacemen t	Mentorship & adaptation support	Community networks

SkillHubs

Skill hubs should serve as **transition bridges**, connecting: **ITDA → Training Centers → Urban Placement Cells**

These hubs must formalize employer partnerships in: Retail and Hospitality, Construction and Technical Trades, Green and Agri-Based Enterprises, Digital and Service-Based Microjobs

Community-Based Mentorship and Peer Support Networks, Mentorship enhances self-confidence and minimizes turnover rates of urban jobs. Tribal graduates and urban working professionals. Local communities, teachers and counselors. The support communities and urban community organizations.

Mentorship Support Areas Cities accommodation and navigation. Work culture orientation Emotional cultural continuity support.

Table 7 Monitoring and Evaluation Framework

Dimension	Sample Indicators
Educational Progress	Retention, language proficiency, certification rates

Urban Indigenous Skill Development and Employability through AI-Driven Multilingual Education Systems: A Human Resource and Policy Perspective

Skill Readiness	Vocational performance and assessment scores
Employability	Job placement rate and role suitability
Cultural Wellbeing	Sense of identity, confidence, community integration

Evaluation indicators must reflect both skill outcomes and identity preservation Technology will enable data tracking through: AI-based progress dashboards, Post-placement feedback monitoring, Continuous adaptive learning recommendations **Sustainability Strategy** For long-term impact: Programs It must be funded with the help of TSP allocations, CSR collaborations, and government digital education missions. The youth in the area ought to be trained to be digital facilitators, eliminating the need to employ external trainers. The culture should be instilled within the indigenous knowledge to prevent the displacement of its culture.

Discussion

Incorporation of AI-based bilingual educational systems into the educational and skills advancement system of indigenous youth is associated with the prospects of transformation as well as with the practical aspects. This section critically explains the implications of the proposed model to human resource development, cultural preservation and urban employability transition. **Aligning Education with Employability Needs** Traditional education systems in tribal areas tend to emphasize on theoretical studies in non-native languages and thus they have poor understanding and low employability rates. The suggested model reorganizes learning to: Start with mother tongue understanding. Development in regional and urban language competency. Move towards market-relevant occupational skills. This development enhances the continuity of learning, confidence, and readiness to be employed, and educates in line with the requirements of the real labor market. **Cultural Identity and Psychological Integration** One of the most pressing issues facing indigenous youth in urban areas is the problem of identity dislocation where there is cultural continuity disrupted by a difference in language, social and environmental factors. The multilingual approach: Cushions the cultural background of the student. Authenticates native language and culture. Lessens mental pressure in urban migration. In such a way, the identity stabilizes with the help of AI-based language support, which does not lead to cultural loss but allows movement. **AI as Enabler: Opportunities and Limitations** **Opportunities** Local-language adaptive learning enhances the comprehension. Speech interfaces minimize the use of literacy as a standalone device. AI-powered skill mapping identifies the indigenous strengths. Evidence-based job matching enhances better employability.

Limitations / Challenges

1. Training AI datasets has to happen in native languages, which means that a long-term linguistic record is needed.
2. Low connectivity areas need **offline-capable AI solutions**.
3. Implementation requires **teacher training and digital facilitator development**.
4. Ethical safeguards must ensure **data privacy and non-exploitative use**.

Solution Path:

Co-design systems with the local teachers, communities and tribal governance institutions so that they are culturally appropriate and have long-term usability.

Human Resource Development (HRD) Perspective

From an HRD standpoint, the model:

1. Recognizes **skills beyond formal schooling**
2. Prioritizes **competency-based certification**
3. Encourages **apprenticeship and experiential learning**
4. Creates structured pathways to:
5. Urban labor markets
6. MSMEs and service sectors
7. Green economy and cultural enterprises

This shifts HR systems toward **inclusive recruitment and workforce integration**.

Policy Implications

The model upholds and operationalizes major objectives of:

1. NEP 2020 (international education, online learning, job integration)
2. SIM (skill certification, livelihood enablement):
3. Tribal Sub- Plan (TSP) (direct welfare targeting)
4. National Digital Education Programs (e-content democratization)

To coordinate policies, there should be coordination between:

1. Tribal Welfare Departments, District level.
2. Institutions of Skill Development Mission.
3. Urban municipal bodies
4. Corporate/industry employer networks.

Overall Insight

The evidence indicates that **employability barriers are not due to lack of capacity**, but due to:

Language exclusion, Digital divide, Lack of well-defined transition strategies. With a solution to these in the form of culturally sensitive AI systems, indigenous youth will be able to engage in urban economies with dignity, continuity, and confidence.

Conclusion

Structural inequalities, language barrier, and difficulty in social adaptation influence the movement of the indigenous youth from tribal areas to urban learning and working conditions. Although indigenous communities have important cultural knowledge, high levels of cooperation and pragmatic skill orientation, they are often poorly represented in the mainstream academic and labor systems. By starting the learning process with the mother-tongue-based learning support, the AI-powered Multilingual Vocational Learning Model introduced in this chapter will ensure that the learners are not asked to make a choice between the culture belonging and the career progression. It also develops relevant skills capacity through vocational training in accordance with the local resources and urban economic opportunities. Digital literacy, employability preparedness, placement networks and mentorship have been integrated to provide a comprehensive channel of sustainable livelihood.

Urban Indigenous Skill Development and Employability through AI-Driven Multilingual Education Systems: A Human Resource and Policy Perspective

The framework is based on the NEP 2020 values and principles, reinforces the human resource development strategies, and addresses the socio-economic requirements of young people of indigenous descent in Telangana and elsewhere. Finally, the chapter concludes by claiming that culturally responsive AI systems are not technological innovations, but they are tools of economic dignity, educational justice, and preserving identity. Empowerment in the case of indigenous people needs to be seen as providing them with an opportunity to involve themselves in the community without necessarily losing their cultural identity. The effectiveness of this model will be determined by shared implementation by educators, policymakers, community leaders, technologists and employers. With the right backing, it can make the redefinition of the indigenous integration into the urban India, as well as making education a place of equity, recognition, and sustainable development

References

1. Aikman, S., & Rao, N. (2019). *Education and inclusion of Indigenous peoples: Learning from research and practice*. International Journal of Educational Development, 72, 102143.
2. Basumatary, R. (2021). Multilingual education and tribal learners in India: Policy and practice challenges. *Journal of Multilingual and Multicultural Development*, 42(7), 621–635.
3. Government of India. (2020). *National Education Policy 2020*. Ministry of Education.
4. Kumar, K., & Sailaja, V. (2020). Language inclusion in tribal education: A review of policy implementation in Telangana. *Indian Journal of Social Development*, 20(2), 55–72.
5. Mahendran, V., & Reddy, G. (2022). Employability and skill development among tribal youth in Telangana: A regional HRD perspective. *Journal of Rural and Community Development*, 17(3), 88–103.
6. Martínez, R., & McDonald, S. (2022). Culturally responsive AI in education: Benefits and ethical challenges. *Computers & Education*, 185, 104533.
7. Ministry of Tribal Affairs (MoTA). (2023). *Statistical profile of Scheduled Tribes in India*. Government of India.
8. Sarma, D. (2021). Digital divide and tribal education: Barriers and opportunities in India. *Educational Technology & Society*, 24(4), 168–180.
9. UNESCO. (2021). *Indigenous peoples and education in the digital age: Opportunities and risks*. UNESCO Publishing.
10. Mayer, J. D., Caruso, D., & Salovey, P. (2021). The ability model of emotional intelligence: Principles and updates. *Emotion Review*, 13(1), 3–17. <https://doi.org/10.1177/1754073920981309>
11. Pandey, S., & Bhattacharya, S. (2024). Emotion-aware intelligent tutoring systems for culturally diverse learners. *Computers & Education*, 205, 104–129. <https://doi.org/10.1016/j.compedu.2023.104689>
12. Zhou, M., & Lin, T. (2023). Adaptive multilingual learning systems: Toward equitable AI in education. *Journal of Educational Technology & Society*, 26(4), 45–61.
13. UNESCO. (2023). *Policy Guide on Multilingual Education for Indigenous Communities*. UNESCO Publishing.
14. Zhang, H., & Li, X. (2022). Teacher-mediated socio-emotional AI interventions in inclusive education environments. *International Journal of Artificial Intelligence in Education*, 32(2), 514–540.
15. Kumar, A., & Shah, D. (2021). Educational challenges among scheduled tribes: A socio-linguistic analysis. *Economic and Political Weekly*, 56(14), 62–69.
16. Chennuri, V. (2022). Tribal identity and mother-tongue schooling in Telangana. *International Journal of Social Sciences Review*, 10(3), 74–88.

17. Narsaiah, L., & Rathod, P. (2023). Post-NEP multilingual learning reforms in Telangana tribal schools. *Journal of Indian Education*, 49(1), 22–39.
18. Rao, S. R. (2022). Emotional belongingness as a predictor of academic participation among indigenous learners. *Journal of Psychology and Education*, 36(2), 118–129.
19. Kulkarni, P. (2023). Human resource development frameworks for teacher emotional competencies. *Indian Journal of Teacher Education and Training*, 12(4), 41–57.
20. Srinivas, K., & Verma, R. (2022). Employability preparedness among rural and tribal higher secondary graduates. *Journal of Human Resource and Development*, 8(2), 91–108.
21. Decker, D., & Sumanasekara, S. (2025). Systematic Review on AI in Emotional Intelligence and Psychological Education: Insights from 30 peer-reviewed studies (2015–2025). *EPRA IJRD*. EPRA Journals+1.
22. Melo-López, V.-A., Basantes-Andrade, A., Gudiño-Mejía, C.-B., & Hernández-Martínez, E. (2025). The impact of AI on inclusive education: A systematic review. *Education Sciences*. MDPI.
23. Lopez, S. (2025). Integrating Artificial Intelligence in Regional Education: A Holistic Framework for Inclusive, Adaptive, Community-Centric Learning. *Electronic Journal of Social and Strategic Studies*. ResearchGate .
24. Adebayo, A. A., Fatai, T. K., & Ekue, C. A. (2024). AI in Multilingual Education: Supporting the Preservation and Instruction of Indigenous Languages. Zenodo.
25. Ferrández, A., Lavigne-Cerván, R., Peral, J., Navarro-Soria, I., Lloret, Á., Gil, D., & Rocamora, C. (2024). CuentosIE: Can a chatbot with “tales with a message” teach emotional intelligence? arXiv.
26. Alsaiani, O., Baghaei, N., Lahza, H., Lodge, J., Boden, M., & Khosravi, H. (2024). Emotionally Enriched Feedback via Generative AI. arXiv.
27. Havaldar, S., Rai, S., Singhal, B., Liu, L., Guntuku, S. C., & Ungar, L. (2023). Multilingual Language Models are not Multicultural: A Case Study in Emotion. arXiv.
28. Goel, R., Susan, S., Vashisht, S., & Dhanda, A. (2022). Emotion-Aware Transformer Encoder for Empathetic Dialogue Generation. arXiv.
29. Planit Teachers AI. (n.d.). AI and Emotional Intelligence in Education: Balancing Technology with Human Connection. Planit Teachers AI. Planitteachers.ai.
30. Edlitera (Delovski, B.). (2023). How Emotional Artificial Intelligence Can Improve Education. Edlitera.
31. Sciencedirect. (2025). A systematic review of research on emotional artificial intelligence in EFL education. ScienceDirect.
32. Sciencedirect. (2025). Enhancing the emotional aspects of language education through generative AI. ScienceDirect.
33. Annanjia, S. (2020). Cultural foundations and language influence in tribal education: A sociocultural perspective. *Journal of Indigenous Studies*, 12(3), 44–59. <https://doi.org/10.1016/j.jis.2020.00312>.