

Restructuring Education: The Intersect of Educational Disruption, Skill-Centricity, and the Indian Knowledge System (IKS)

Geetha Madhusudan¹; Ramachandra N. U.²; Shivakumara D. C.³

¹Professor, Department of Languages (Sanskrit Area)

²Assistant Professor, Department of Languages (Sanskrit Area), Research Scholar at IITD,

³Associate Professor, Department of Languages (Kannada Area),
^{1,2,3}Jain (Deemed to be University)

Publication Date: 2026/07/10

Abstract: The current state of higher education faces an existential crisis owing to excessive credit system, cost levels, and increasing disconnect with the rapidly advancing automation-based economy. This paper seeks to deal with the universally faced problem by studying the ways in which existing university frameworks may equip individuals to deal with the challenges of a highly unpredictable career life. Combining the above issues, we bring forth the epistemological and structural framework of the Indian Knowledge System (IKS) as a possible solution. By synthesizing the focus on experiential competence (Kaushal) and a seamless trans-disciplinary approach over limited certification-based systems, we attempt to argue and build an adaptive and skills-based system of global education.

Keywords: Disruption, Skills, IKS, Trans-Disciplinary Education.

How to Cite: Geetha Madhusudan; Ramachandra N. U.; Shivakumara D. C. (2026) Restructuring Education: The Intersect of Educational Disruption, Skill-Centricity, and the Indian Knowledge System (IKS). *International Journal of Innovative Science and Research Technology*, 11(6), 3097-3100. <https://doi.org/10.38124/ijisrt/26jun1798>

I. INTRODUCTION

➤ The Universal Crisis of Modern Higher Education

The worldwide system of formal education is experiencing a turning point in history. This model, developed during the period of the Industrial Revolution to create obedient and specialized employees along clearly defined occupational paths, involves a series of linear processes: strict academic disciplines, standard theoretical evaluation, and terminal qualification courses (Boruah, 2022).

- The Automation of Cognitive Tasks: With the rise of generative intelligence, neural networks, and hyper-automation, cognitive work has become commercialized. Skills that had traditionally been considered important at universities, such as code memorization, basic math computation, and linear historical accounting, can be done automatically in an instant.
- The Hyper-Accelerated Reduction of the Knowledge Half-Life: The half-life of technical knowledge has been reduced to under five years, making four-year curriculums outdated even before graduation.
- The Competence-Value Mismatch: Higher education has been disconnected from its real-world usefulness. Universities act as social gatekeepers who issue

credentials and generate inflationary student debt without offering any market survival skills.

However, the unprecedented development of the technology of generative artificial intelligence, machine learning, and cognitive automation has completely undermined this system. The crisis of universal higher education is characterized by two key problems: a rapid skills gap between educational degree tracks and the market conditions, as well as a strong values gap due to transactional academic goals.

II. THE NATURE OF MODERN EDUCATIONAL DISRUPTION

The Rate of Technological Obsolescence: The half-life of skills in technical and professional disciplines has fallen below five years in most industries. Curriculums developed at the beginning of a regular four-year curriculum have become obsolete before students enter the workforce. Because of the instantaneous ability of the modern technologies to automate repetitive cognitive skills, the market value of human capital has moved from passive knowledge retention towards continual reskilling and dynamic implementation.

The Certificate Fallacy and Market Reality: One critical deficiency in the existing model of modern education is the phenomenon of "credit System" which means preference of certification over capability on the institutional level. Statistics prove the deficiency. The Economic Survey of India reveals a severe structural disparity between certifications and market utility showing that more than 53% of students have remained underemployed due to lack of correlation between certificates and competence (SPRF, 2025). The problem is not confined to particular regions, as the global human resource trackers show a deliberate change in policy of major employers who switch to skills-based recruitment ignoring rigid requirements for degrees altogether. The Silo Effect Modern education requires students to operate within linear and isolated disciplinary realms.

➤ *The Problem of Disciplinary Silos*

That modern education dis-members students into disconnected, unidisciplinary silos (e.g. computer science / philosophical ethics; engineering / ecological design). Yet, the world's most complex challenges such as designing ethical AI algorithms, managing climate resilience, or navigating global bio-security risks are inherently trans disciplinary. This rigid departmental division produces an atomized view of reality, rendering students unable to tackle actual problems in the world whose very nature is complex and cannot easily be compartmentalized.

III. THE INDIAN KNOWLEDGE SYSTEM (IKS) AS A RE-ENGINEERING BLUEPRINT

The Indian Knowledge System (IKS) offers a comprehensive, time-tested approach to resolving these systemic issues. Historically, ancient higher learning networks like Takshashila, Nalanda, and Sharada Peeth did not emphasize static parchment degrees. Instead, their entire educational philosophy was built upon Pratyaksha (verifiable, direct experimental application) and the cultivation of Kaushal (applied mastery) and Pratibha (adaptive intelligence).

➤ *Competence Over Credentials*

In the IKS model, an individual's education was verified not by an abstract token of completion, but through active, real-world demonstration evaluated by peers and validated by its social utility. IKS operates on the understanding that while formal certifications quickly become obsolete during economic shifts, an adaptable mind rooted in core foundational principles provides lifelong protection against professional irrelevance.

➤ *Trans-Disciplinary Fluidity*

IKS historically rejected artificial boundaries between different fields of study. For instance, an ancient architect (*Sthapati*) was expected to master structural engineering alongside geology, poetry, climatology, and civic ethics. Reviving this fluid, multi-domain paradigm is essential to preparing a modern workforce for non-linear, multi-career lifecycles. Within IKS, knowledge (*Jnana*) and action (*Karma*) are never treated as separate paths; they form a unified continuum guided by *Dharma* (ethical duty) and aimed at *Loka Kalyana* (the well-being of the collective) (IJSI, 2026).

IV. EMPIRICAL STUDY: DECENTRALIZED ARTISANAL SKILLS VS. HEAVY INDUSTRY CAPITALIZATION

To analyze the long-term sustainability and job-creation power of experiential, skill-first frameworks over rigid, capital-intensive credentials, we can evaluate India's traditional manufacturing sectors—such as indigenous metallurgy, and handloom weaving—alongside high-capital heavy industries.

According to official data from the *Annual Survey of Unincorporated Sector Enterprises (ASUSE) 2025* published by the Ministry of Statistics and Programme Implementation (MoSPI), India's unincorporated, non-agricultural sector has expanded to include 7.92 crore establishments. This sector serves as a vital, decentralized engine for livelihood generation that operates largely outside traditional academic channels.

Furthermore, the Ministry of Skill Development and Entrepreneurship (MSDE) reports that over 23.66 lakh traditional craftsmen spanning 18 distinct specialized trades (such as potters, blacksmiths, carpenters, and sculptors) have been integrated into modern upskilling frameworks via the *PM Vishwakarma Scheme*. This indicates that massive economic sectors can thrive and adapt entirely via organic, master-apprentice (*Guru-Shishya*) networks where the quality of work matters far more than an official degree.

Furthermore, the Ministry of Skill Development and Entrepreneurship (MSDE) reports that over 23.66 lakh traditional craftsmen spanning 18 distinct specialized trades (such as potters, blacksmiths, carpenters, and sculptors) have been integrated into modern upskilling frameworks via the *PM Vishwakarma Scheme*. This indicates that massive economic sectors can thrive and adapt entirely via organic, master-apprentice (*Guru-Shishya*) networks where the quality of work matters far more than an official degree.

Table 1 Sector Scale Statistics

01. Sector Scale & Growth	02. Inclusion & Demographics	03. Operational Ecosystem
• 7.92 Crore Establishments (+7.97%)	• 29% Female workforce participation	• 650K Units surveyed via e-SIGMA
• 12.81 Crore Total Workers (+6.18%)	• 60%+ Manufacturing firms female-led	• CAPI Software used for field data
• +10.87% Robust growth in GVA	• Institutional Credit replacing informal	• Open-source Unit-level microdata

(Source: Ministry of Statistics and Programme Implementation [MoSPI], 2025)

V. SYSTEMIC SOLUTIONS: OPERATIONALIZING IKS IN MODERN UNIVERSITY STRUCTURES

Re-engineering global higher education requires moving past ideological rhetoric and implementing concrete, structurally auditable reforms. Transitioning from a credential-heavy model to a performance-verified architecture involves the following pragmatic innovation pathways:

➤ *Shifting from Terminal Degrees to Cumulative Skill Portfolios*

Universities must replace the rigid, time-bound four-year degree with a continuous, stackable micro-credential portfolio. Under this model, students matriculate by demonstrating *Pratyaksha* (verifiable, direct execution) through live project repositories rather than passive letter grades.

- **Pragmatic Implementation:** Academic credit should be awarded dynamically via audited "Proof of Skill" tokens, modeled after traditional master-apprentice setups. Graduation occurs when a student successfully defends a live, functional portfolio before a mixed panel of academic and industry practitioners, completely replacing the outdated, rote-learned final examination.

➤ *Transitioning to Trans-Disciplinary Problem Hubs*

Institutions should systematically dissolve rigid, siloed academic departments and reorganize around trans-disciplinary innovation tracks. Modern technical challenges cannot be solved within isolated domains.

- **Pragmatic Implementation:** For example, a student specializing in Autonomous Systems should not graduate from an isolated computer science department. Instead, they must operate within an integrated hub that requires them to simultaneously build advanced technical models (like neural networks) while applying classical logic and ethics systems (derived from frameworks like *Nyaya* and *Vaisheshika*). This ensures that technical capabilities are structurally bonded to rigorous ethical, social, and systemic constraints.

➤ *Institutionalizing the Applied Apprenticeship Model*

To end the mismatch between university curricula and shifting market realities, higher education must legally integrate work and learning into a single, unified track.

- **Pragmatic Implementation:** Universities should adopt a "Co-Operative Sandbox" framework, where students split their academic calendar evenly between conceptual modules and industry-embedded apprenticeships. Theoretical concepts are introduced to support real-world execution, ensuring that abstract knowledge is immediately tested against, and refined by, actual market constraints and community needs.

VI. CONCLUSION

The universal disruption of higher education signals the clear end of the industrial-era, credential-obsessed university model. Protecting future generations from immediate professional obsolescence requires a fundamental shift in how knowledge is acquired, verified, and applied.

By prioritizing demonstrated competence over formal degrees, and fluid, trans-disciplinary integration over narrow specialization, the Indian Knowledge System provides a clear, practical path forward for global educational reform. Combining modern technological tools with the deep, skill-first wisdom of IKS offers a scalable blueprint for an educational renaissance—creating a resilient system that produces highly capable, technically proficient, and ethically grounded global citizens.

REFERENCES

- [1]. Boruah, P. "Experiential Learning Paradigms and Traditional Wisdom Paths." *Journal of Pedagogical Innovations*, vol. 14, no. 2, 2022, pp. 45–58.
- [2]. G20 Culture Working Group. *Background Paper: Promotion of Cultural and Creative Industries and Creative Economy*. G20 Culture Working Group, 2023.
- [3]. Government of India. *Economic Survey of India 2024–25*. Ministry of Finance, Department of Economic Affairs, 2025.
- [4]. Ministry of Skill Development and Entrepreneurship (MSDE). *Year-End Review 2025: Transforming the Skill Landscape*. Press Information Bureau, Government of India, 2025.
- [5]. Ministry of Statistics and Programme Implementation (MoSPI). *Annual Survey of Unincorporated Sector Enterprises (ASUSE) 2025*. National Sample Survey Office, Government of India, 2025.
- [6]. Ramachandra, N. U. "Traditional Knowledge, Challenges and the Need for Revival." *Res Militaris*, vol. 12, no. 2, 2022, pp. 1611–1619.
- [7]. Ramachandra, N. U., Geetha Madhusudan, and D. C. Shivakumara. "भारतीयज्ञानपरम्परायां कौशलशिक्षा: अभिलषितार्थचिन्तामणेः समीक्षात्मकम् अध्ययनम्." *International Journal of Sanskrit Research*, vol. 12, no. 3, 2026, pp. 309–313.
- [8]. Ramachandra, N. U., D. C. Shivakumara, and N. L. Geetha Madhusudan. "Aesthetics to Neural Substrate: Reframing Rasa Theory from the *Nāṭyaśāstra* for Affective Neuroscience and Digital Humanities Research." 2026. *Unpublished manuscript*.
- [9]. Ramachandra, N. U., Geetha Madhusudan, D. C. Shivakumara, and L. Natesha, editors. *Indian Knowledge System: Aesthetics, Philosophy, Cultural Semiotics, Skill Education and Contemporary Relevance*. Deep Science Publishing, 2025.
- [10]. "Alignment with Outcome-Based Education." *Indian Knowledge System: Aesthetics, Philosophy, Cultural*

Semiotics, Skill Education and Contemporary Relevance, edited by N. U. Ramachandra, Geetha Madhusudan, D. C. Shivakumara, and L. Natesha, Deep Science Publishing, 2025, pp. 1–12.

- [11]. Sustainable Policy Research Foundation (SPRF). *Unpacking the Current Scenario of India's Skilling Landscape: Analysis of the Economic Survey*. Sustainable Policy Research Foundation, 2025.
- [12]. UNESCO. *Creative Economy Outlook 2023*. United Nations Educational, Scientific and Cultural Organization, 2023.