



---

## A Study of Fostering Cultural Empathy by NEP's Integration of Indian Knowledge System on Industry Adaptation Preparedness

---

Prof. Mrunalini Khandare<sup>1</sup>, Dr. Kalpana Deshmukh<sup>2</sup>,

Dr. Hetal N. Bhinde<sup>3</sup> & Prof. Vaibhavi Shahane<sup>4</sup>

<sup>1</sup>Assistant Professor, Indira School of Business Studies

<sup>2</sup>Associate Professor, Indira School of Business Studies

<sup>3</sup>Assistant Professor, Indira School of Business Studies

<sup>4</sup>Assistant Professor, Indira School of Business Studies

Corresponding Author – Prof. Mrunalini Khandare

DOI - 10.5281/zenodo.15100861

---

### Introduction:

The Indian educational system significantly shifted its paradigm after the New Education Policy (NEP) 2020, as the Indian Knowledge System (IKS) has been introduced to the current curricula. This course aims to preserve and promote India's rich culture and heritage by developing cultural sensitivity among students, which is crucial for both industrial preparedness and holistic development of students. NEP 2020's mission is to improve industrial adaptation readiness. This can be achieved by integrating IKS into the education system to create a knowledge-rich generation with a profound connection to its culture.

Cultural empathy is essential for raising socially responsible citizens who can deal with a complex, globalized world, which is one of the goals of NEP 2020. IKS helps students to understand and experience diverse perspectives and practices of various cultures. This exposure enhances empathy and prepares employees for a collaborative yet competitive work environment where cultural sensitivity is predominant. Employees imbued with cultural empathy give innovative and effective inputs for the workplace, as industries continue working in multicultural environments (Danino, 2024).

Moreover, the integration of IKS into the education system strongly holds the gear over industry preparedness. For the modern obstacles or challenges in significant areas such as agriculture, health, and environmental sustainability, the traditional Indian knowledge system provides time-tested solutions. The best example is Ayurveda, or organic farming techniques based on IKS, which are adapted by modern approaches for sustainable development (UGC, 2023). To address global issues and remain grounded in the local context, NEP fosters a proficient workplace by educating students with traditional knowledge. The pedagogical framework and strategy change as IKS is integrated into the educational system. Trained educators should facilitate learning that encourages exploration and critical thinking about Indigenous knowledge (Gaur 2024). This approach empowers students, and by integrating local experts and practitioners into the educational process, it also revitalizes the teaching profession. To engage students meaningfully with their cultural heritage, enhancing their authentic learning experience is mandatory.

Under the advanced framework of NEP 2020, integrating IKS into the education system creates huge opportunities for promoting cultural empathy and better industry adaptation among students. NEP plans to upgrade the upcoming generation with greater awareness of the culture and skills necessary to succeed in the world by respecting traditional knowledge as well as contemporary

practices. This is the holistic approach, where youths proactively contribute to society's future while honoring India's rich heritage (Mathur, 2024).

### **Literature Review:**

The National Education Policy (NEP) 2020 intends to strengthen India's educational system through integrating Indian Knowledge Traditions (IKT) into the curriculum, raising cultural awareness, and emphasizing holistic development (Karanwal & Singh, 2023). This technique corresponds with traditional Vedic educational ideas that stress self-realization and socialization (Dhage et al., 2023). The "learning crisis" is addressed by the NEP, which focuses core skills in literacy and math. To foster multicultural empathy and challenge students' ideas, Haigh (2009) suggests introducing a non-Western academic framework such as Sāmkhya philosophy. Regardless, the students can be resistant and prefer to adhere to the familiar practices (Haigh, 2009). To achieve the vision, NEP should promote interdisciplinary research, train teachers in IKT, and collaborate with traditional academics (Karanwal & Singh, 2023). Developing countries will be inspired by the exemplary model of India's NEP (Muralidharan and Singh, 2021). The NEP encourages a multidisciplinary approach, adaptable curricula, and skill development (Chowdhury & Hanumanthu, 2023), but lacks a clear focus on intellectual property, innovation, and entrepreneurship (Chowdhury & Hanumanthu, 2023). The COVID-19 pandemic has posed a challenge to NEP 2020 by limiting access to technology (Rahman, 2022). Teachers often prefer a clan culture because it prioritizes mentoring and teamwork and encourages participatory decision-making in leadership (Chennattuserry, 2022). The tailor-made curriculum framework has been designed and developed specifically for Tier-II schools to achieve the vision of NEP 2020. In this framework, approaches like computer science and engineering, multi-entry/exit choices, and experiential learning have been included (Umarji et al. 2022). This framework may also be extended to other engineering disciplines, ensuring alignment with NEP objectives and integrating performance measures (Umarji et al., 2022). Traditional knowledge, especially about medicinal plants, is influenced more by environmental factors than by cultural heritage or regional proximity (Saslis-Lagoudakis et al., 2014). Not only in scientific and business contexts but also in its own right, this knowledge is very crucial (Nakata, 2002). In Nepal, the integration of climate change adaptation with traditional forest management practices is very helpful for sustainable forest management and biodiversity conservation (Kark et al. 2018). Knowledge-based systems using ontology techniques have not only improved the representation of unstructured data and outperformed traditional keyword-based search engines, but they have also decreased obstacles to accessing and protecting cultural content (Raj et al. 2022). To foster both scientific research and local communities, these critical systems merge contemporary information management with indigenous knowledge. Incorporation of indigenous knowledge and multilingual instruction has been focused more by education policy and practices into the modern curricula. NEP 2020 offers an intriguing model for multilingual education that promotes equity and cognitive liberty (Mahapatra and Anderson, 2023). By introducing Aboriginal and Torres Strait Islander people to indigenous perspectives within healthcare education, Australia is working to improve cultural safety and health outcomes (Naitoo et al. 2023). Protecting intellectual property for Indigenous knowledge has been under consideration along with the proposal of integrating knowledge protection protocols into the existing framework (Oguamanam, 2004). The universities are developing their programs and infrastructure to meet the demand of Industry 4.0, helping students to master skills like adaptive thinking and data analytics. To achieve this remarkable evolution, which provides great opportunities but comes with challenges, strategic planning and great partnerships with industries are required (Mian et al., 2020). This features collaborative research on ethical standards, knowledge management, and indigenous knowledge across different contexts. Indians are influenced by cultural values like Dharma and Nishkama Karma when it comes to making ethical decisions, especially in the healthcare industry (Mathew and Wesarat, 2021). For the preparation industry, knowledge hiding by leadership can lower organizational commitment and trust

and degrade co-created value (Pandey et al., 2022). Though there are limitations of Indigenous knowledge in urban areas and their institutional frameworks, it is crucial for climate change adaptation, particularly in tropical and drought-rural areas (Petzold et al., 2020). When there were extreme droughts in Java, Indonesia, Pranata Mangsa, the traditional knowledge system, guided agricultural practices and helped the communities to survive (Zaki et al., 2020). These examples showcase the importance of integrating cultural values and indigenous knowledge into professional and environmental settings.

The loss of any plant species or loss of cultural knowledge can affect the network linking culture and biological heritage, hence the Indigenous knowledge plays a crucial role for climate change adaptation and biodiversity (Cámara-Leret et al., 2019). For example the traditional ecological knowledge (TEK) is used by people of Sarawak, Malaysia, to locate climate change and manage resource sustainably (Hosen et al., 2020). Just like them the tribal communities from the northeast part of India, developed a well TEK related to species and ecosystems, which are applied in the areas like forestry, agriculture, healthcare and more (Tynsong et al., 2020). The National Curriculum Framework 2005 emphasizes that education should be adaptable, providing quality education in line with national development objectives. These studies highlight the need to preserve and incorporate TEK into modern practices for sustainable resource management and adaptation to climate change.

Research from the Global South and greater interdisciplinary integrations are more visible recently as the result of climate change on UNESCO World Heritage Sites (Nguyen and Baker, 2023). Africa is including indigenous knowledge within research practices to achieve more meaningful and empowering outcomes (Owusu-Ansah and Mji, 2013). Though India's NEP 2020 aims to enhance the quality of life through educational reform, the main challenge is digitalization (Muralidharan et al., 2022). Whereas, in Nepal, socioeconomic and land-use changes have affected medicinal plant use, which leads to the reliance on non-indigenous species (Kunwar et al., 2016). This shows the resilience of traditional medicine systems which is adapting in the changing environment. Various global challenges are addressed by different perspectives and local knowledge.

The collection of papers covered diverse aspects of education, industry, and culture. Sharma et al. (2022) analyze how sustainable human resource management and Industry 4.0 technologies affect employability skills, emphasizing training, flexibility, and employee empowerment. Evaluate e-teaching acceptance in India, emphasizing the importance of technology sharing and course integration (Huang et al. 2022). Discover the problems of propagating indigenous knowledge research systems in cattle science while also recognizing farmers' efforts (Ravikumar et al., 2017). Promoting indigenization, nationalization, and spiritualization of education, but delivering little details (Sundar, 2002). These studies highlight the importance of adapting education to modern technologies and indigenous knowledge systems in a variety of sectors and communities.

By collecting different issues of education and business related to Industry 4.0 is resolved. According to Thanikanchalam, (2020), five-theme approach model can be a solution to Indian engineering education's challenges brought by Industry 4.0. The impact of Industry 4.0 technologies on workforce skills and employability in South Asia was reviewed and studied (Miah et al., 2024). An evidence-based research on traditional medicines to ensure standardization and safety was called for by (Mukherjee et al., 2010). (Jackson and Aycan, 2006) discuss the integration of cultural diversity paradigms in international scholarship. For the changing industrial needs and cultural perspectives, there is a need to emphasize on education and research. New findings related to Industry 5.0 and educational policy, particularly in human-robot collaboration and innovation-oriented learning, are also explored. Coronado et al. (2024) designed a package integrating ROS and NEP+ frameworks for digital twins in Industry 5.0. India's NEP 2020 is poised to enhance higher education in terms of innovation, quality, and access (Kopala et al., 2023). Dustker et al. (2023) suggested service-learning as a pedagogical tool to achieve NEP 2020 goals, particularly in engineering education. These developments align with global efforts to tackle challenges, such as climate change.

There are some studies suggesting that to improve Indian higher education, the collaboration with international curriculum and reform are mandatory. Enhancing academic partnerships' flexibility and integrating with foreign institutions under NEP 2020 is being suggested by (Kumar and Pandya, 2024). Baiga tribal knowledge can be included in school curricula to examine (Sarangapani, 2023) and explore the diverse responses to internationalization in Indian universities (Kirloskar & Inamdar, 2022). A new evaluation model for competency-based learning and authentic assessment aligned with NEP 2020 is being proposed by (Kumar V et al., 2023). Summarizing these papers identifies the challenges of modern higher education, which is continuously evolving and simultaneously preserving indigenous knowledge and addressing the diversity of institutions. For internationalization and curriculum development, specific and tailored-made strategies are needed.

This review concludes the various studies focusing on education and environment in developing countries. For example, the importance of teaching native languages and integrating local knowledge is emphasized in Nepalese curricula (Acharya et al, 2021). In Russia and India, fostering innovation within various industry clusters emphasizes the role of an institutional framework (Klarin et al., 2021). The STEM education system in India could improve by integrating culturally relevant teaching methods (Kulshreshtha et al., 2022). A method for assessing walkability in urban areas of India is being proposed (Adlakha et al., 2016). These research findings illustrate the necessity for educational and environmental studies in developing countries to adopt culturally aware and context-specific strategies.

By encouraging cultural sensitivity and sustainability in learning and creativity, indigenous knowledge greatly improves students' academic experiences (Handayani et al., 2018). This is where the concept of "communities of learning" enters the picture, fusing academic and scientific approaches to natural resource management with Indigenous knowledge (Robson et al., 2009). Traditional knowledge and cultural capital are used by ayurvedic cosmetics companies to spur innovation and build market credibility (Baghel and Parthasarathy, 2019). The COVID-19 pandemic has accelerated the need for adaptive teaching practices, forcing educators to consider local knowledge systems essential in overcoming the challenges of the pandemic (Stoeckl et al., 2021). To align education with the evolving digital world and to address the complexities of climate change, it is crucial to combine indigenous knowledge with modern scientific methods. These actions foster global sustainability and equitable development.

### **Research Gap:**

Although NEP 2020's integration into the educational system is highly valued, there is a lack of empirical proof of its implementation, especially with regard to industrial preparation. Whereas previous research has suggested that IKS can potentially promote culture empathy and sustainability, its effects on students' employability, skills, and capacity for innovation in multicultural settings have not yet been evaluated. Other significant issues that have not yet been thoroughly examined include pedagogical readiness, teacher preparation, and cooperation with traditional scholars. This causes the research arc on creating scalable frameworks for successfully integrating IKS to change, guaranteeing that it is in line with the requirements of modern industry practices.

### **Objective:**

The aim of this study is to:

1. Measuring the post-effect of incorporating Indian Knowledge Systems (IKS) into educational system on students' preparedness for multicultural industry workforce and cultural empathy.
2. While focusing on enhancement of industry readiness, identify the challenges and their solutions for effective integration of IKS in education system.
3. As cultural empathy is a bridge between IKS integration and students' adaptation to industry demands, evaluating its role and effect.

**Materials and Methods:****Research Design:**

A quantitative research method design is adapted in this research to evaluate students' cultural empathy and preparedness for industry challenges affected by the Indian Knowledge System (IKS) under the NEP 2020.

**Sampling Plan:**

1. Population: In this research we include all 1240 MBA colleges in Maharashtra as the population, focusing the colleges in Pune, Maharashtra
2. Sample: The sample will focus on MBA students from the colleges in Pune, Maharashtra, where the city is divided into six zones: East, West, North, South, Central, and PCMC. Each zone will contribute one MBA college and selected area sample for their representation of educational diversity.
3. Sampling Method: Kaizen Morgan method is adapted as the sampling method. By adapting this technique, sample size is determined on the bases of a structured approach to ensure statistical validity while considering time and resource constraints.
4. Sample Size: By employing Kaizen Morgan table, sample size of 400 respondents will be selected to ensure a statistically adequate sample for the desired level of confidence and accuracy in the results.

**Hypothesis:**

1. Hypothesis 1 ( $H_1$ ): Integrating Indian Knowledge System (IKS) through NEP 2020 in the education system which positively impacts students' cultural empathy.  
Independent Variable: NEP's integration of IKS.  
Dependent Variable: Cultural empathy.
2. Hypothesis 2 ( $H_2$ ): Cultural empathy mediates the relationship between IKS integration and industry adaptation preparedness.  
Independent Variable: NEP's integration of IKS.  
Mediating Variable: Cultural empathy.  
Dependent Variable: Industry adaptation preparedness.

**Analysis Method:**

Means, standard deviation, and frequencies are included in descriptive statistics to summarize and describe the data collected from Likert scale surveys. For Hypothesis 1 ( $H_1$ ), to examine the relationship between the integration of Indian Knowledge Systems (IKS) under NEP 2020 and students' cultural empathy Regression Analysis will be used. Also, the mediating role of cultural empathy between IKS integration and industry adaptation preparedness. Regression Analysis will be used.

**Proposed Model:**

This research will use a mediation model, where the independent variable (IKS integration) affects the dependent variable (industry adaptation preparedness) through the mediating variable (cultural empathy).

**Data Analysis:****Descriptives:**

This descriptive statistics summary provides a clear and detailed analysis of these three critical aspects.

1. Cultural Empathy (CE) reflects the ability to empathize and adapt across different cultural contexts.
2. Integration of Indian Knowledge Systems (IIKS): Indicates the extent to which Indian Knowledge Systems have been incorporated or integrated.

3. Industry Adaptation Preparedness (IAP) measures readiness and preparedness to adapt to industry needs.

The analysis included measures of central tendency, variability, and distribution shape, offering insights into the performance and spread of these variables. The calculation of z-scores allows for standardization, making it easier to identify outliers or to compare data points relative to the mean.

	N	Range	Minimum	Maximum	Sum	Mean	Std. Deviation
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic
Avg_CE	400	4.0	1.0	5.0	1731.2	4.328	.6781
Avg_IKS	400	4.0	1.0	5.0	1739.7	4.349	.6667
Avg_IAP	400	4.0	1.0	5.0	1709.7	4.274	.7006
Valid N (listwise)	400						

The results indicated that the respondents scored high on all three dimensions.

1. Cultural Empathy (CE): Respondents demonstrated a strong ability to empathize across cultural contexts, as reflected in the high mean score of 4.328.
2. Integration of Indian Knowledge Systems (IKS): There was a consistent and high level of integration of Indian Knowledge Systems, as seen in the mean score of 4.349.
3. Industry Adaptation Preparedness (IAP): Participants exhibited good preparedness for adapting to industry needs, with a mean of 4.274.

For all three variables, the standard deviations (ranging from 0.6667 to 0.7006) indicate that responses were largely uniform and clustered around the average. High means suggest that most participants provided positive ratings, but the range (4.0) and the minimum/maximum scores (1.0 to 5.0) indicate that a full spectrum of possible answers was captured. Emphasizing the benefits of these areas, these findings suggest a bright future for Industry Adaptation Preparedness, Integration of Indian Knowledge Systems, and Cultural Empathy.

#### Reliability:

A total of 30 items embodying the three concepts of Industry Adaptation Preparedness (IAP), Integration of Indian Knowledge Systems (IKS), and Cultural Empathy (CE) underwent a reliability analysis implemented through Cronbach's alpha.

The reliability of the questionnaire is assessed using Cronbach's alpha, which indicates how well the items within each construct assess the same fundamental concept. A higher reliability (alpha value at or above 0.7) signifies that the products are consistent and trustworthy.

- The questionnaire is considered reliable for assessing CE, IKS, and IAP if it produces a high Cronbach's alpha (for instance, > 0.7).
- A low alpha may suggest that the framework of the questionnaire requires reassessment, that poorly performing questions should be revised, or possibly both.

The analysis ensured the quality and consistency of the collected data, which is crucial for making dependable conclusions and performing further statistical studies.

A total of forty-two cases (9.5% of the overall sample) were excluded due to missing information, leaving 400 valid responses (90.5%) that were analyzed for reliability. To ensure the analysis is both precise and reliable, it relies on a complete and uniform dataset, achieved through listwise deletion. This technique allows for the calculation of the questionnaire's internal consistency and Cronbach's alpha using only fully completed and valid responses. Nonetheless, the exclusion of the 42 cases highlights the need for future analyses to explore methods for managing missing data (such as imputation) in order to minimize data loss.

Reliability Statistics	
Cronbach's Alpha	N of Items
.976	30

**Reliability:**

- To evaluate the three constructs of Industry Adaptation Preparedness (IAP), Integration of Indian Knowledge Systems (IICS), and Cultural Empathy (CE), a Cronbach's Alpha value of 0.976 confirms the high reliability of the questionnaire.

**Hypothesis 01:** Integrating Indian Knowledge System (IKS) through NEP 2020 in the education system which positively impacts students' cultural empathy.

**Regression:**

Regression analysis is employed to assess whether Avg IICS (Integration of Indian Knowledge Systems) and Avg CE (Cultural Empathy) are significant predictors of one another.

Descriptive Statistics			
	Mean	Std. Deviation	N
Avg_CE	4.328	.6781	400
Avg_IICS	4.349	.6667	400

**Descriptive Statistics:**

Both cultural empathy (Avg CE) and Indian knowledge systems (Avg IICS) have high means and low standard deviations, indicating that participants regularly and generally give these topics high ratings.

Correlations			
		Avg_CE	Avg_IICS
Pearson Correlation	Avg_CE	1.000	.864
	Avg_IICS	.864	1.000
Sig. (1-tailed)	Avg_CE	.	.000
	Avg_IICS	.000	.
N	Avg_CE	400	400
	Avg_IICS	400	400

**Correlation:**

- A significant positive correlation has been found between elevated levels of Cultural Empathy and greater Integration of Indian Knowledge Systems ( $r = 0.864$ ,  $p = 0.000$ ).
- This study suggests that the inclusion of Indian knowledge systems may enhance or positively influence cultural awareness.
- The significance of concentrating on IICS to promote cultural empathy in pertinent circumstances is underscored by our findings, which distinctly demonstrate a strong correlation between the two variables.

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	df1
1	.864 <sup>a</sup>	.747	.747	.3414	.747	1176.388	1

Avg IICS emerged as an important predictor of Avg CE, and there was a strong positive correlation observed between the two variables ( $r = 0.864$ ), as indicated by the stepwise regression analysis.

- The model explains 74.7% of the variance in Cultural Empathy (Avg CE), suggesting that the Integration of Indian Knowledge Systems plays a crucial role in fostering cultural empathy.

- The F-statistic confirms the overall significance of the model, and the Standard Error of the Estimate provides an estimate of the typical error in predicting Avg CE based on Avg IKS.

These results emphasize the importance of integrating knowledge systems in India to enhance cultural empathy.

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	137.087	1	137.087	1176.388	.000 <sup>b</sup>
	Residual	46.380	398	.117		
	Total	183.466	399			

a. Dependent Variable: Avg CE

b. Predictors: (Constant), Avg IKS

- ANOVA tests the overall significance of the regression model.
- An F-value of 1176.388, with a p-value of 0.000, confirms that the regression model is statistically significant.
- The findings suggest that Avg CE (Cultural Empathy) is strongly forecasted by Avg IKS (Integration of Indian Knowledge Systems), with a considerable amount of the variance in Avg CE being accounted for by the model.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	Avg_IKS
		B	Std. Error	Beta			Tolerance	
1	(Constant)	.504	.113		4.471	.000		1.000
	Avg_IKS	.879	.026	.864	34.299	.000	1.000	.001

a. Dependent Variable: Avg CE

- Unstandardized Coefficients: The constant (0.504) represents the predicted value of Avg CE when Avg IKS is zero. The coefficient for Avg IKS is 0.879, indicating that for every unit increase in Avg IKS, Avg CE increases by 0.879 units.
- Standardized Coefficients (Beta): A beta value of 0.864 shows that Avg IKS has a strong positive effect on Avg CE. This is a strong predictor, as beta values close to 1 or -1 indicate a significant influence.
- t-Statistic: The t-statistics for both constant (4.471) and Avg IKS (34.299) are highly significant, with p-values of 0.000, indicating that both coefficients are statistically different from zero.
- Tolerance: The tolerance value for Avg IKS was 1.000, indicating no multicollinearity (no correlation with other predictors, as there was only one predictor in the model).

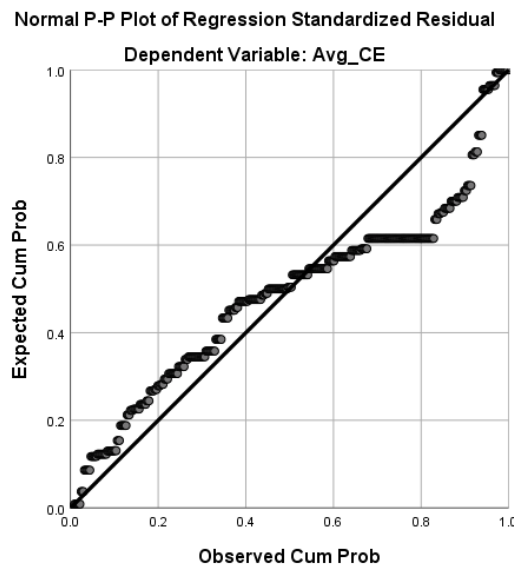
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions	
				(Constant)	Avg_IKS
1	1	1.988	1.000	.01	.01
	2	.012	13.139	.99	.99

a. Dependent Variable: Avg CE

- A Condition Index of 13.139 indicates that there is no significant multicollinearity issue. A value above 30 would suggest potential collinearity problems, but here, it is well below that threshold, indicating that the model is stable.
- The variance proportions show that Avg IKS contributes almost entirely to the second dimension with a value of 0.99, confirming its dominance in explaining the variance in Avg CE.



## Charts



**Hypothesis 02:** Cultural empathy mediates the relationship between IKS integration and industry adaptation preparedness.

### Regression

The regression analysis investigates whether Avg IKS (Integration of Indian Knowledge Systems) can significantly predict Avg IAP (Industry Adaptation Preparedness) and Avg CE (Cultural Empathy).

Descriptive Statistics			
	Mean	Std. Deviation	N
Avg_IAP	4.274	.7006	400
Avg_IKS	4.349	.6667	400
Avg_CE	4.328	.6781	400

### Descriptive Statistics:

Both Avg IAP (Industry Adaptation Preparedness), Avg IKS (Integration of Indian Knowledge Systems), and Avg CE (Cultural Empathy) show significant positive correlations with each other.

Correlations				
		Avg_IAP	Avg_IKS	Avg_CE
Pearson Correlation	Avg_IAP	1.000	.812	.719
	Avg_IKS	.812	1.000	.864
	Avg_CE	.719	.864	1.000
Sig. (1-tailed)	Avg_IAP	.	.000	.000
	Avg_IKS	.000	.	.000
	Avg_CE	.000	.000	.
N	Avg_IAP	400	400	400
	Avg_IKS	400	400	400
	Avg_CE	400	400	400

### Correlation:

- The Pearson correlation coefficient between Avg IAP and Avg IKS was 0.812, indicating a strong positive relationship.
- Avg IAP and Avg CE showed a moderately strong positive correlation (0.719).
- The correlation between Avg IKS and Avg CE was 0.864, which suggests a strong positive relationship.

These results provide clear evidence of robust relationships between constructs, underscoring the importance of integrating Indian knowledge systems to foster both positive attitudes and cultural empathy.

### Model Summary<sup>b</sup>

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	df 1
1	.812 <sup>a</sup>	.659	.658	.4095	.659	770.101	1

Stepwise regression analysis indicated that Avg IAP was a significant predictor of Avg IKS with a strong positive correlation between the two variables ( $r = 0.812$ ).

- Regarding integrating Indian knowledge systems, the model explains 65.9% of the variance in Avg IKS, indicating the importance of Industry Adaptation Preparedness.
- Based on Avg IAP, the Standard Error of the Estimate measures the typical error in predicting Avg IKS, while the F-statistic confirms the model's overall significance.

These results highlight the importance of Industry Adaptation Preparedness in enhancing the integration of knowledge systems in India.

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	129.116	1	129.116	770.101	.000 <sup>b</sup>
	Residual	66.729	398	.168		
	Total	195.845	399			

a. Dependent Variable: Avg IAP

b. Predictors: (Constant), Avg IKS

- ANOVA tests the overall significance of the regression model.
- An F-value of 770.101, with a p-value of 0.000, confirms that the regression model is statistically significant.
- Accordingly, Avg IAP (Industry Adaptation Preparedness) is significantly predicted by Avg IKS (Integration of Indian Knowledge Systems), and a sizable portion of the variance in Avg IAP may be explained by the model.

Coefficients <sup>a</sup>								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	
1	(Constant)	.563	.135		4.164	.000		1.000
	Avg_IKS	.853	.031	.812	27.751	.000	1.000	.001

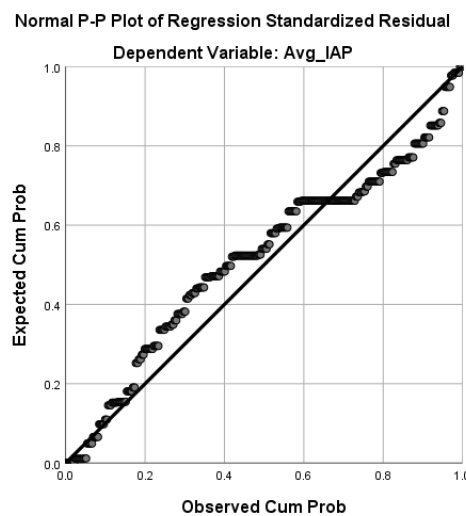
- The undefined Coefficient (B) for Avg IKS = 0.853 indicates that Avg IAP is expected to rise by 0.853 units for every unit increase in Avg IKS. This provides us with an unambiguous, comprehensible value for the extent to which Avg IKS affects Avg IAP.
- Standardized Coefficient (Beta) for Avg IKS = 0.812: This is a standardized measure, allowing for comparison between different predictors. The value of 0.812 shows that Avg IKS has a strong influence on Avg IAP, meaning that changes in Avg IKS are highly associated with changes in Avg IAP.
- $t = 27.751$ ,  $p < 0.001$ : The t-statistic tests whether the coefficient for Avg IKS is significantly different from zero. A value of 27.751 is very large, and with a p-value of less than 0.001, we can confidently say that Avg IKS is a significant predictor of Avg IAP.

Collinearity Diagnostics <sup>a</sup>					
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions	
				(Constant)	Avg_IKS
1	1	1.988	1.000	.01	.01
	2	.012	13.139	.99	.99

a. Dependent Variable: Avg IAP

- Tolerance = 1.000 for Avg IKS: Tolerance values close to 1 indicate no multicollinearity problems, meaning Avg IKS is not highly correlated with other predictors in the model.
- Variance Inflation Factor (VIF): Since Avg CE was excluded, the VIF for Avg IKS is not available, but typically, a VIF value above 10 would suggest multicollinearity. With Avg CE excluded, multicollinearity is not a concern in this model.

## Charts



## Conclusion:

This paper explores the incorporation of Indian Knowledge Systems within the framework of the National Education Policy 2020 and its impact on fostering cultural empathy in students as well as preparing them for adapting to diverse industry environments. The study shows, through statistical analysis and actual data, that IKS integration exerts a significant effect on students' cultural empathy, which in turn improves their preparedness for industry obstacles.

NEP 2020 highlights the theoretical benefits of IKS, which the research emphasizes and transforms into real-world results like students' employability and innovative talents. The research's relationship between IKS integration and industry readiness and cultural empathy development addresses an important shortcoming in the literature, which primarily focuses on theoretical perspectives with little proof of the real-world impacts of IKS on industry adaptation. Although the results were positive, a number of challenges to IKS implementation in educational contexts were identified. These challenges include antiquated teaching strategies, inadequate teachers' training, and an absence of cooperative engagement with traditional academics. These issues could make it more challenging for IKS integration to achieve the required level of industry readiness and cultural sensitivity if they are not fixed.

## Suggestions:

- Educational institutions must update their curricula to include specialized modules on Indian Knowledge Systems (IKS) in order to effectively incorporate IKS into MBA programs. This will ensure that students realize the importance of cultural heritage in modern industry contexts. The topics covered in these modules ought to include ethical decision-making, sustainable development concepts, traditional management methods and leadership philosophies influenced

by Indian culture. A full educational experience that prepares students for a variety of industry difficulties can also be achieved by implementing a cross-disciplinary approach that integrates IKS throughout different topics (such as management, ethics, and sustainability).

- Faculty Development Programs: Tailored training programs are required since teachers play a critical role in making it possible to integrate IKS. Teachers should be prepared with innovative methods of instruction that encourage active participation, critical thinking, and implementation of IKS. This calls for the introduction of certification programs and professional development seminars that teach IKS in an engaging way that fosters students' cultural empathy. In order to help teachers cultivate cultural awareness and empathy in a variety of student groups, the training should also cover effective teaching techniques for multicultural classrooms.
- Partnerships with Heritage Keepers: The study highlights the inadequate cooperation between academic institutions and the people who preserve Indian knowledge systems as a major challenge. Institutions of higher learning should swiftly seek for opportunities to work with IKS-focused groups, particularly research institutes, cultural bodies, and traditional educational institutions. These partnerships have the potential to enhance students' learning experiences by bringing real perspectives and professional insights to the classroom. IKS can be strengthened through collaborative research projects, guest lectures, and cultural exchange events that provide professors and students with opportunity to interact with traditional knowledge.
- Partnership between Industry and Academic Institutions: To guarantee that IKS integration serves the demands of contemporary industry, it is essential to bridge the gap between academic institutions and the industry. Robust collaborations between businesses and universities are necessary to provide opportunities for students to use IKS in real-world situations. Workshops, seminars, and internships led by professionals in the field can give students an inside view of how IKS can promote innovation and sustainable practices in their company's operations. In order to shape curriculum content and give students real-world case studies to explore, this collaboration should be organized around feedback mechanisms.
- Development of Scalable Models: It is crucial to create a framework for IKS integration that is consistent as well as applicable to different institutions and regions. This framework ought to ensure successful teaching methods, provide precise guidance on how to integrate IKS into various academic programs, and evaluate its impact on students' ability to adjust to the demands of the workplace. These models ought to be sufficiently flexible to adjust to a variety of learning settings, such as conventional classrooms, online learning environments, or hybrid learning formats.

#### **Implementation of Study:**

This can be done following a structured approach to implementing this study's recommendations.

- Curriculum Enhancement and Curriculum Development: Educational institutions can work with teams who have expertise in curriculum development to develop and roll out new courses that highlight IKS and its applicability to modern industry. Such courses could be introduced as electives or used to improve existing courses, such the MBA. University accreditation standards that require IKS-related information to be included in curricula across India can also be developed in collaboration with policymakers and educational regulatory authorities.
- Professional Development Training for Instructors: More professional development programs that focus on improving instruction with IKS materials should be offered. Workshops, instructor seminars, and, most importantly, collaborative model teaching with seasoned colleagues and traditional scholars when co-teaching IKS courses provided across different universities might help achieve this. Learning in this field is also anticipated to be enhanced by digital platforms that provide online training for educators.

- **Cooperation with Institutions of Traditional Knowledge:** Educational institutions have the capacity to formally work alongside institutions of traditional knowledge. Co-hosting conferences, participating in research projects, and planning guest lectures oriented on the real-world implementation of IKS in business and industry are examples of opportunities for collaboration. This process may be facilitated by partnerships with organizations like INTACH or different local traditional knowledge practitioners.
- **Industry Partnership Initiatives:** Fostering robust connections between academia and industry is crucial to ensuring the practical application of IKS. Universities can connect with industry leaders to create internships and research projects that allow students to engage directly with companies on real-world challenges involving IKS. These initiatives could aim to explore how traditional Indian knowledge can contribute to sustainable business practices, leadership methodologies, and problem-solving strategies across different sectors.
- **Pilot Programs and Evaluation:** To assess the incorporation of IKS, pilot programs should be implemented at selected universities and academic departments. Chosen student cohorts will experience a curriculum enriched with IKS content. This approach will enable monitoring of student progress over time through both qualitative and quantitative feedback from students, educators, and industry partners to determine the impact of the integration on cultural awareness and readiness for the industry.

#### **Future Scope of Study:**

The future scope of this research is expansive, with several key areas that can be explored to deepen the understanding of IKS integration:

1. **Longitudinal Research on Career Advancement:** To determine the long-term impacts of incorporating Indigenous Knowledge Systems (IKS), future studies could track alumni to find out how their comprehension of IKS has influenced their success in a variety of cultural contexts, their ability to adapt within sectors, and their career paths. The outcomes of students from IKS-integrated programs and those from traditional programs could potentially be compared in such studies.
2. **Comparative Multicultural Research:** Future research might look at how IKS integration in education is interpreted and applied in different nations, especially in multicultural and multinational settings, increasing the focus beyond India. Researchers could discover the global applicability of IKS and its capacity to promote global cultural empathy by evaluating India with other countries.
3. **Industry-Specific Research:** A deeper exploration of the influence of IKS within certain sectors such as technology, healthcare, and finance would yield insightful findings on how traditional knowledge can be woven into industry-specific business practices. For example, IKS principles might be assessed in relation to sustainable business practices, technological innovation, or ethical considerations in healthcare.
4. **Evaluating the Role of Digital Learning Environments:** With the growing prevalence of online education, there exists an opportunity to investigate how digital platforms can effectively deliver IKS content. Research could focus on the integration of IKS into e-learning modules and online classes, especially considering the increasing trend of hybrid and distance learning in higher education.
5. **Cultural Empathy's Influence on Leadership Development:** Future research could explore how cultural empathy, promoted through IKS integration, plays a role in cultivating leadership qualities, particularly when managing diverse teams and navigating international business landscapes. This could examine the ways in which culturally empathetic leaders impact organizational culture, foster innovation, and navigate international business relationships.

6. Assessment of Policy Implementation and Expansion: Given the significance of NEP 2020, future research can aim to assess the effects of these policies on higher education institutions throughout India. This could include evaluating the accomplishments and challenges of applying IKS-focused curricula, along with suggesting frameworks for amplifying IKS integration on a national scale.

**References:**

1. Danino, M. (2024). NEP 2020: Michel Danino advocates 'complete overhaul' of school education. *The Hindu*.
2. Gaur, S. (2024). Integrating Indian Knowledge Systems into Modern Education: An Analysis of the National Education Policy (NEP) 2020. *EPR International Journal of Multidisciplinary Research*, 10(6). <https://doi.org/10.2139/epajournals.com/IJMR/article/13473>
3. Mathur, S. (2024). Reviving India's knowledge systems for modern Indian education and society. *Financial Express*.
4. Ministry of Education. (2023). Indian Knowledge Systems - Ministry of Education. Retrieved from <https://www.education.gov.in/nep/indian-knowledge-systems>
5. Karanwal, B., & Singh, B. (2023). Embedding Indian knowledge traditions in school education. *The Journal of English Language and Literature*, 10(3), Article 8. <https://doi.org/10.54513/joell.2023.10308>
6. Dhage, P. R., et al. (2023). Tracing the roots of National Education Policy 2020 and the Indian constitutional dimensions of it. *Russian Law Journal*, 11(1S). <https://doi.org/10.52783/rlj.v11i1s.369>
7. Haigh, M. (2009). Fostering cross-cultural empathy with non-Western curricular structures. *Journal of Studies in International Education*, 13(2), 271–284. <https://doi.org/10.1177/1028315308329791>
8. Muralidharan, K., & Singh, A. (2021). India's new National Education Policy: Evidence and challenges. *Science*, 372(6537), 36–38. <https://doi.org/10.1126/science.abf6655>
9. Roy Chowdhury, A., & Hanumanthu, P. (2023). Analysing India's National Education Policy from the angle of research, IP, innovation, and entrepreneurship. *Journal of Intellectual Property Rights*, 28(3), 161–171. <https://doi.org/10.56042/jipr.v28i3.1616>
10. Chennattuserry, J. (2022). Clan culture in organizational leadership and strategic emphases: Expectations among school teachers in India. *Journal of School Administration Research and Development*, 7(1), 1–10. <https://doi.org/10.32674/jsard.v7i1.3585>
11. [11] Rahman, A. (2022). Review of essential amendments in Indian higher education with special reference to the COVID-19 pandemic and National Education Policy (NEP) 2020. *International Journal of Learning, Teaching and Educational Research*, 21(12), 128–140. <https://doi.org/10.26803/ijlter.21.12.9>
12. Umarji, I. R., Yadawad, R., Patil, R., Kulkarni, V., & Kulkarni, U. (2022). A framework for a curriculum to ensure minimum standards for flexible, experiential, and multi-disciplinary learning toward achieving NEP-2020 goals. *Journal of Engineering Education Transformations*, 35(S1), 1–9. <https://doi.org/10.16920/jeet/2022/v35is1/22032>
13. Nakata, M. (2002). Indigenous knowledge and the cultural interface: Underlying issues at the intersection of knowledge and information systems. *IFLA Journal*, 28(5-6), 281–291. <https://doi.org/10.1177/034003520202800513>
14. Karki, G., Paudel, B., & Uprety, B. (2018). Integrating forests and biodiversity in Nepal's National Adaptation Plan: A review and synthesis of knowledge stock on opportunities and way forward. *Banko Janakari*, 27(2), 20–29. <https://doi.org/10.3126/banko.v27i2.21220>
15. Saslis-Lagoudakis, C., Hawkins, J., Greenhill, S. J., Pendry, C., Watson, M., Tuladhar-Douglas, W., Baral, S. R., & Savolainen, V. (2014). The evolution of traditional knowledge: Environment shapes medicinal plant use in Nepal. *Proceedings of the Royal Society B: Biological Sciences*, 281(1780), 20132768. <https://doi.org/10.1098/rspb.2013.2768>
16. Raj, H., Harsh, K., Khattri, P., & Haider, T. U. (2022). Knowledge-based system of Indian culture using ontology with customized named entity recognition. *Journal of Computer Science*, 18(3), 172–186. <https://doi.org/10.3844/jcsp.2022.172.18>

17. Mahapatra, S., & Anderson, J. (2023). Languages for learning: A framework for implementing India's multilingual language-in-education policy. *Language and Education*, 37(2), 105–121. <https://doi.org/10.1080/14664208.2022.2037292>
18. Naidoo, T., Chamunyonga, C., Burberry, J., & Rutledge, P. (2023). Identifying methods to best integrate indigenous knowledge and perspectives within the radiation therapy undergraduate curriculum. *Journal of Medical Radiation Sciences*, 70(2), 155–164. <https://doi.org/10.1002/jmrs.660>
19. Oguamanam, C. (2004). Localizing intellectual property in the globalization epoch: The integration of indigenous knowledge. SSRN. <https://doi.org/10.2139/ssrn.2308623>
20. Mian, S. H., Salah, B., Ameen, W., Moiduddin, K., & Alkhalefah, H. (2020). Adapting universities for sustainability education in Industry 4.0: Channel of challenges and opportunities. *Sustainability*, 12(15), 6100. <https://doi.org/10.3390/su12156100>
21. Mathew, J., & Wesarat, P. (2021). Linking ethical standards for healthcare professionals with Indian cultural values. *Asia Pacific Journal of Health Management*, 16(3), 1–9. <https://doi.org/10.24083/apjhm.v16i3.965>
22. Pandey, J., Hassan, Y., Pandey, J., Pereira, V., Behl, A., Fischer, B., & Laker, B. (2022). Leader signaled knowledge hiding and erosion of cocreated value: Microfoundational evidence from the test preparation industry. *IEEE Transactions on Engineering Management*, 69(6), 2065–2076. <https://doi.org/10.1109/tem.2022.3149005>
23. Petzold, J., Andrews, N., Ford, J., Hedemann, C. J., & Postigo, J. (2020). Indigenous knowledge on climate change adaptation: A global evidence map of academic literature. *Environmental Research Letters*, 15(12), 123004. <https://doi.org/10.1088/1748-9326/abb330>
24. Zaki, M., Noda, K., Ito, K., Komariah, K., Sumani, S., & Senge, M. (2020). Adaptation to extreme hydrological events by Javanese society through local knowledge. *Sustainability*, 12(24), 10373. <https://doi.org/10.3390/su122410373>
25. Cradock-Henry, N. A., Buelow, F., Flood, S., Blackett, P., & Wreford, A. (2019). Towards a heuristic for assessing adaptation knowledge: Impacts, implications, decisions, and actions. *Environmental Research Letters*, 14(11), 113002. <https://doi.org/10.1088/1748-9326/ab370c>
26. Carpenter, S. D., & Grünewald, F. (2016). Disaster preparedness in a complex urban system: The case of Kathmandu Valley, Nepal. *Disasters: The Journal of Disaster Studies, Policy and Management*, 40(2), 269–290. <https://doi.org/10.1111/disa.12164>
27. Madhavan, M., Wangtueai, S., Sharafuddin, M., & Chaichana, T. (2022). The precipitative effects of pandemic on open innovation of SMEs: A scientometrics and systematic review of Industry 4.0 and Industry 5.0. *Journal of Open Innovation: Technology, Market and Complexity*, 8(3), 152. <https://doi.org/10.3390/joitmc8030152>
28. Tshamano, N. W., Joshua, M., Terry, M. N., & Lee, K. S. (2023). A new era of entrepreneurship: The transformative potential of African traditional medicine. *The Social Science*, 12(3), 140–148. <https://doi.org/10.11648/j.ss.20231203.18>
29. Cámara-Leret, R., Fortuna, M. A., & Bascompte, J. (2019). Indigenous knowledge networks in the face of global change. *Proceedings of the National Academy of Sciences of the United States of America*, 116(34), 16765–16774. <https://doi.org/10.1073/pnas.1821843116>
30. Hosen, N., Nakamura, H., & Hamzah, A. (2020). Adaptation to climate change: Does traditional ecological knowledge hold the key? *Sustainability*, 12(2), 676. <https://doi.org/10.3390/su12020676>
31. Tynsong, H., Dkhar, M., & Tiwari, B. (2020). Review: Traditional ecological knowledge of tribal communities of North East India. *Biodiversitas*, 21(7), 3431–3439. <https://doi.org/10.13057/biodiv/d210743>
32. Training NCERT. (2005). The National Curriculum Framework 2005. *Journal of Education and Practice*, 6(6), 14–24. <https://doi.org/10.1177/0973184913411109>
33. Nguyen, K. N., & Baker, S. (2023). Climate change and UNESCO World Heritage-listed cultural properties: A systematic review, 2008–2021. *The Heritage*, 6(3), 126. <https://doi.org/10.3390/heritage6030126>
34. Owusu-Ansah, F. E., & Mji, G. (2013). African indigenous knowledge and research. *African Journal of Disability*, 2(1), 30. <https://doi.org/10.4102/ajod.v2i1.30>

35. Muralidharan, K., Shanmugan, K., & Klochkov, Y. (2022). The New Education Policy 2020, digitalization and quality of life in India: Some reflections. *Education Sciences*, 12(2), 75. <https://doi.org/10.3390/educsci12020075>
36. Kunwar, R., Baral, K., Paudel, P., Acharya, R., Thapa-Magar, K., Cameron, M., & Bussmann, R. (2016). Land-use and socioeconomic change, medicinal plant selection and biodiversity resilience in far western Nepal. *PLoS ONE*, 11(11), e0167812. <https://doi.org/10.1371/journal.pone.0167812>
37. Sharma, M., Luthra, S., Joshi, S., & Kumar, A. (2022). Analyzing the impact of sustainable human resource management practices and Industry 4.0 technologies adoption on employability skills. *International Journal of Manpower*, 43(8), 1706–1726. <https://doi.org/10.1108/ijm-02-2021-0085>
38. Huang, T.-Y., Chen, W.-K., Nalluri, V., & Huynh-Cam, T.-T. (2022). Evaluating e-teaching adoption criteria for Indian educational organizations using fuzzy Delphi-TOPSIS approach. *Mathematics*, 10(13), 2175. <https://doi.org/10.3390/math10132175>
39. Ravikumar, R., Thakur, D., Choudhary, H., Kumar, V., Kinhekar, A., Garg, T., Ponnusamy, K., Bhojne, G., Shetty, V., & Kumar, V. (2017). Social engineering of societal knowledge in livestock science: Can we be more empathetic? *Veterinary World*, 10(1), 86–91. <https://doi.org/10.14202/vetworld.2017.86-91>
40. Sundar, N. (2002). “Indigenise, nationalise and spiritualise”– An agenda for education? *Oxford Development Studies*, 30(2), 163–177. <https://doi.org/10.1111/1468-2451.00389>
41. Thanikachalam, V. (2020). Synthesis on narrowing the gap between engineering education and industry through science, technology, economics, management, and ‘fire fighting’ (STEMF). *Journal of Engineering Education Transformations*, 33(0), 150070. <https://doi.org/10.16920/jeet/2020/v33i0/150070>
42. Mukherjee, P., Venkatesh, P., & Ponnusankar, S. (2010). Ethnopharmacology and integrative medicine – Let the history tell the future. *Journal of Ayurveda and Integrative Medicine*, 1(2), 112-119. <https://doi.org/10.4103/0975-9476.65077>
43. Miah, M. T., Erdei-Gally, S., Dancs, A., & Fekete-Farkas, M. (2024). A systematic review of Industry 4.0 technology on workforce employability and skills: Driving success factors and challenges in South Asia. *Economies*, 12(2), 35. <https://doi.org/10.3390/economies12020035>
44. Jackson, T., & Aycan, Z. (2006). Editorial: From cultural values to cross-cultural interfaces. *International Journal of Cross-Cultural Management*, 6(2), 123-137. <https://doi.org/10.1177/1470595806062348>
45. Coronado, E., Ueshiba, T., & Ramirez-Alpizar, I. (2024). A path to Industry 5.0 digital twins for human-robot collaboration by bridging NEP+ and ROS. *Robotics*, 13(2), 28. <https://doi.org/10.3390/robotics13020028>
46. Kopala, M. R., Ashta, A., Mor, S., & Parekh, N. (2023). The co-evolution of India’s policy on science, technology, and innovation with university education: The need for innovation in higher educational institutions. *Space and Culture, India*, 11(2). <https://doi.org/10.20896/saci.v11i2.1333>
47. Dustker, S., Bandi, S., & Oakes, W. (2023). Scope of service-learning in accomplishing objectives of National Education Policy 2020, India - A conceptual analysis. *Journal of Engineering Education Transformations*, 36(Special Issue 2), 23054. <https://doi.org/10.16920/jeet/2023/v36is2/23054>
48. Roy, S., Tandukar, S., & Bhattarai, U. (2022). Gender, climate change adaptation, and cultural sustainability: Insights from Bangladesh. *Frontiers in Climate*, 4, 841488. <https://doi.org/10.3389/fclim.2022.841488>
49. Kumar, S. V., Kumar, A. N. V., Bisoyi, S. K., & Pandey, J. (2023). The novel evaluation scheme for competency-based learning, authentic assessment, and its implementation strategies for universities of higher education. *Journal of Engineering Education Transformations*, 36(IS2), 23032. <https://doi.org/10.16920/jeet/2023/v36is2/23032>
50. Kirloskar, P., & Inamdar, N. (2022). International cooperation among universities: Accommodating diversity within Indian higher education. *Journal of Higher Education Policy and Leadership Studies*, 3(2), 72–85. <https://doi.org/10.52547/johepal.3.2.72>
50. Sarangapani, P. (2003). Indigenising curriculum: Questions posed by Baiga Vidya. *Comparative Education*, 39(2), 199–209. <https://doi.org/10.1080/03050060302552>



51. Kumar, N. S., & Pandya, V. (2024). The tech tale of progression: Need for academic collaborations and tie-ups. *Educational Administration: Theory and Practice*, 30(5), 45–55. <https://doi.org/10.53555/kuey.v30i5.3130>
52. Acharya, B., Kshetree, M. P., Khanal, B., Panthi, R. K., & Belbase, S. (2021). Mathematics educators' perspectives on the cultural relevance of basic level mathematics in Nepal. *Journal of Mathematics Education*, 12(1), 17–48. <https://doi.org/10.22342/jme.12.1.12955.17-48>
53. Klarin, A., Sharmelly, R., & Suseno, Y. (2021). A systems perspective in examining industry clusters: Case studies of clusters in Russia and India. *Journal of Risk and Financial Management*, 14(8), 367. <https://doi.org/10.3390/jrfm14080367>
54. Kulshreshtha, P., Gupta, S., Shaikh, R., Aggarwal, D., Sharma, D., & Rahi, P. (2022). Foldscope embedded pedagogy in STEM education: A case study of SDG4 promotion in India. *Sustainability*, 14(20), 13427. <https://doi.org/10.3390/su142013427>
55. Adlakha, D., Hipp, J., Brownson, R., Timmermans, H., Kemperman, A., & van den Berg, P. V. D. (2016). Adaptation and evaluation of the neighborhood environment walkability scale in India (NEWS-India). *International Journal of Environmental Research and Public Health*, 13(4), 401. <https://doi.org/10.3390/ijerph13040401>
56. Baghel, D., & Parthasarathy, D. (2019). Knowledge generation for innovation in Ayurvedic cosmetics MSMEs: Investigating entrepreneur's cultural and symbolic capital. *Science, Technology & Society*, 24(1), 24–45. <https://doi.org/10.1177/0971721818821795>
57. Chaturvedi, S., Purohit, S., & Verma, M. (2021). Effective teaching practices for success during COVID-19 pandemic: Towards physical learning. *Frontiers in Education*, 6, 646557. <https://doi.org/10.3389/feduc.2021.646557>
58. Robson, J., Miller, A., Idrobo, C., Burlando, C., Deutsch, N., Kocho-Schellenberg, J.-E., Pengelly, R. D., & Turner, K. (2009). Building communities of learning: Indigenous ways of knowing in contemporary natural resources and environmental management. *Australian Journal of Environmental Education*, 25(2), 95-106. <https://doi.org/10.1080/03014220909510574>
59. University Grants Commission (UGC). (2023). Guidelines for Incorporating Indian Knowledge in Higher Education Curricula. Retrieved from [https://www.ugc.gov.in/pdfnews/6436045\\_Guidelines-IKS-in-HE-Curricula.pdf](https://www.ugc.gov.in/pdfnews/6436045_Guidelines-IKS-in-HE-Curricula.pdf)