

Rs. 50.00
ISSN-0566-2257



UNIVERSITY NEWS

A Weekly Journal of Higher Education

Association of Indian Universities

Vol. 63 • No. 19 • May 12–18, 2025

Sreelogna Dutta Banerjee and Jayanta Mete

Tributes to Krishnaswamy Kasturirangan: Architect of Indian Education and Space Exploration for *Viksit Bharat @2047*—Part-I[#]

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Advancing Educational Excellence and Institutional Quality: A Unified Approach for Achieving the Sustainable Development Goals

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Call for Social Justice
– Convocation Address



ASSOCIATION OF INDIAN UNIVERSITIES



NOTIFICATION FOR SUBMISSION OF PROPOSALS UNDER THE

Academic and Administrative Development Centre (AADC) Initiative



The Association of Indian Universities (AIU), the premier representative body of universities and higher education institutions in India, invites proposals and Expressions of Interest (EOI) from its member universities for the establishment of Academic and Administrative Development Centre (AADC) under its flagship initiative launched in 2022.

About AADC

The AADC initiative is a forward-looking programme introduced by AIU to strengthen the academic and administrative ecosystem of Indian higher education. The Centres aim to enhance the professional capacities of faculty and administrative staff in universities and other Higher Education Institutions (HEIs).

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- ▶ Developing e-content and leveraging technology for continuous assessment and evaluation.
- ▶ Facilitating research collaborations.
- ▶ Conducting programmes on effective university governance & administration through technological advancements.

Proposal Submission Details



Interested member universities/HEIs are invited to submit their EOI and detailed proposal, duly endorsed by the Head of the Institution, to the following address:

Ms. Ranjana Parihar

Joint Secretary
Association of Indian Universities (AIU)
AIU House, 16 Comrade Indrajit Gupta Marg,
New Delhi – 110002

✉ **Email:** aadc@aiu.ac.in

☎ **Phone:** 011-23230059 (Ext. 228)

🌐 For detailed guidelines, please visit: www.aiu.ac.in

Last date for submission:
May 15, 2025

General Terms & Conditions

- ✓ Each approved center shall be designated as AIU-[University Name] Academic and Administrative Development Centre (AIU-AADC).
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- ✓ A total of 20 member universities will be selected based on the quality of proposals and available infrastructure. Member universities where AADC Centers are already operational need not apply.
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 - b) The remaining ₹50,000 upon submission of a Utilization Certificate
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 - (b) Assisting in the design and development of course content.
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AIU encourages all eligible member universities to actively participate in this impactful initiative aimed at transforming higher education through continuous professional development and capacity building. Let us join hands to build a stronger, more innovative, and future-ready academic landscape for India.

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Tributes to Krishnaswamy Kasturirangan: Architect of Indian Education and Space Exploration for *Viksit Bharat* @2047—Part-I#

Sreelogna Dutta Banerjee* and Jayanta Mete**

Dr. K. Kasturirangan, born in 1940 in Ernakulam, Kerala, is a towering figure in the fields of both space research and education reform. As one of India's foremost scientists and visionaries, he played a foundational role in shaping the Indian Space Research Organisation (ISRO) and later spearheaded transformative changes in India's educational landscape through his leadership in drafting the National Education Policy (NEP) 2020.

In his capacity as Chairman of ISRO between 1994 and 2003, Dr. Kasturirangan led the organization during a pivotal period of growth and expansion. He was instrumental in the successful development and operationalization of the Indian National Satellite System (INSAT) and the Indian Remote Sensing (IRS) satellites, both of which significantly strengthened India's capabilities in communication, meteorology, and earth observation (Chakrabarti, 2019). Furthermore, under his leadership, the Polar Satellite Launch Vehicle (PSLV) reached operational maturity, laying the foundation for more ambitious future projects. One of his notable achievements was advancing the Geosynchronous Satellite Launch Vehicle (GSLV) program, enhancing India's capacity to launch heavier payloads into geostationary orbits (Chakrabarti, 2019).

It was during Dr. Kasturirangan's tenure that India's first serious discussions about lunar exploration began. Although the actual launch of Chandrayaan-1 occurred post his retirement, the conceptualization, strategic groundwork, and early feasibility studies were carried out under his stewardship. Recognizing that India had firmly established itself in earth-centric applications, he argued that planetary exploration was a natural and necessary evolution for the nation's space ambitions (Ramesh, 2021). Between 1999 and 2000, ISRO, under his leadership, initiated internal studies and consultations leading to the formation of a Lunar Mission Task Force that would chart out potential scientific objectives like high-resolution mapping, mineralogical analysis, and lunar exosphere studies (Sridhar, 2020).

Another crucial contribution of Dr. Kasturirangan was his focus on indigenous technology development. He insisted that India must develop its own deep-space communication systems, scientific payloads, and navigation capabilities to maintain autonomy and technological self-reliance. His strategic investments in the PSLV upgrades enabled

#The Article is in two parts. Part -2 will be published in the next Issue Vol 63(20).
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the launch platform needed for Chandrayaan-1, while his emphasis on international collaboration set the stage for partnerships with agencies like NASA and the European Space Agency (Sahasrabudhe, 2020). Though Chandrayaan-1 launched in 2008 under the leadership of his successors, the seeds of India's lunar exploration efforts were undoubtedly sown during his chairmanship.

Transitioning from space to education, Dr. Kasturirangan continued to influence India's developmental trajectory by taking on the monumental task of overhauling the national education policy. As Chairman of the Committee for NEP-2020, he envisioned an education system that was holistic, flexible, multidisciplinary, and rooted in Indian cultural values while being globally competent (Ministry of Education, 2020).

Central to his educational philosophy was the promotion of critical thinking, creativity, and problem-solving skills rather than rote memorization. As Prof. Anil Sahasrabudhe notes, Dr. Kasturirangan stressed the need for education that fosters holistic development, blending intellectual, emotional, ethical, and physical growth (Sahasrabudhe, 2020). NEP-2020, guided by his vision, dismantled the rigid disciplinary barriers that separated science, arts, and commerce, allowing students the freedom to tailor their learning journeys according to their passions and interests.

Vocational education was another key priority for Kasturirangan. He believed that skill development and practical training should be integral components of formal education to prepare students for the rapidly evolving knowledge economy. NEP-2020, therefore, proposes that by 2025, 50% of learners should have exposure to vocational education, thus bridging the gap between academic knowledge and real-world application (Ministry of Education, 2020).

Moreover, Dr. Kasturirangan's outlook emphasized technology integration without dehumanizing the educational process. He recognized the power of digital platforms to democratize learning, especially in remote and marginalized communities, while cautioning that technology must be a tool, not a substitute for the teacher-student relationship (Ramesh, 2021). His policy recommendations envisioned the use of adaptive learning technologies, virtual classrooms, and digital content to enhance inclusivity and quality in education.

An equally important facet of his vision was the integration of Indian knowledge systems into mainstream education. Prof. M. K. Sridhar, a key member of the NEP drafting committee, highlighted that Kasturirangan strongly advocated for a curriculum that celebrates India's ancient wisdom traditions while preparing students for contemporary challenges (Sridhar, 2020). Thus, NEP-2020 recommends promoting classical languages like Sanskrit, studying ancient sciences, and integrating indigenous ecological and philosophical knowledge into the education system.

Throughout both his space science and educational endeavours, Kasturirangan's hallmark has been the ability to blend scientific rigor with cultural rootedness. He envisioned a future where India leads globally not by imitating others but by drawing strength from its civilizational ethos while embracing innovation, research, and critical inquiry.

In conclusion, whether charting India's journey beyond Earth or crafting a visionary blueprint for India's intellectual future, Dr. K. Kasturirangan emerges as a master architect who has significantly influenced India's national development. His contributions to Chandrayaan's conceptualization and to NEP-2020's holistic educational reforms reflect his dual legacy as a pioneer of Indian science and a philosopher of Indian education. Even after his earthly journey, his ideas will continue to guide India's cosmic dreams and educational aspirations for generations to come.

Childhood and Early Education

Dr. Krishnaswamy Kasturirangan, born on October 24, 1940, in Ernakulam, Kerala, spent his formative years in an academically inclined environment that fostered curiosity and discipline. Raised in a traditional South Indian family, young Kasturirangan exhibited a keen interest in mathematics and physics from an early age, encouraged by his teachers and family members who emphasized rigorous study habits (Nair, 2018). His early schooling took place in Kerala, where he developed a strong foundation in science and analytical thinking. Later, he pursued his undergraduate studies at Ramnarain Ruia College in Mumbai, a pivotal phase where his passion for space and astrophysics grew stronger (Sharma, 2020).

Recognizing his academic brilliance, Kasturirangan continued his education at the

University of Mumbai, earning a Master's degree in Physics with specialization in Electronics. His intellectual rigor and clarity of thought, noted even in his college days, set the stage for his future contributions to India's scientific and educational landscape. As Prof. A. K. Sharma mentions, Kasturirangan's early exposure to disciplined learning and scientific inquiry shaped not only his career in space research but also his progressive vision for India's educational reforms (Sharma, 2020).

Religious and Cultural Influences

Dr. K. Kasturirangan's upbringing in a traditional South Indian Brahmin family in Kerala deeply influenced his cultural and spiritual outlook. Although primarily known for his scientific and educational contributions, Kasturirangan's worldview has been subtly shaped by the values of Vedantic philosophy and the emphasis on knowledge (jnana) found in Hindu traditions (Menon, 2019). His early exposure to scriptures like the Bhagavad Gita instilled in him a belief in disciplined action (karma yoga) and the pursuit of excellence without attachment to outcomes, a principle often reflected in his leadership style at ISRO (Rao, 2020).

Culturally, growing up in Kerala exposed him to a rich heritage of classical music, Sanskrit learning, and temple traditions, nurturing a sense of harmony between science and spirituality. According to Prof. S. R. Rao, Kasturirangan always advocated a balanced approach where modern scientific temper coexists with India's timeless civilizational values (Rao, 2020). His contributions to education policy also reflect this synthesis, promoting indigenous knowledge systems alongside global learning frameworks. Thus, while deeply rational in his scientific pursuits, Kasturirangan's cultural roots provided him with a broad, inclusive vision, respecting both empirical knowledge and traditional wisdom.

Family Values and Discipline

Dr. K. Kasturirangan's life was deeply shaped by the strong family values and discipline instilled during his early years. Growing up in a traditional South Indian Brahmin household, he was taught the importance of honesty, humility, perseverance, and respect for knowledge from a young age (Pillai, 2018). His parents emphasized a strict daily routine that balanced academic study, cultural learning, and spiritual practices. According to Prof. G. Madhavan

Nair, Kasturirangan's upbringing cultivated an extraordinary sense of self-discipline, which later became a hallmark of his leadership at ISRO (Nair, 2020).

Morning prayers, structured study hours, and respect for elders were integral parts of his daily life, forming the foundation of his work ethic and moral compass. These early lessons in discipline helped him handle the complex challenges of leading large scientific missions with calmness and precision. Educators like Prof. Anil Kakodkar have remarked that Kasturirangan's methodical, principled approach to problem-solving reflects the deep ethical grounding he inherited from his family (Kakodkar, 2020). Thus, his family's influence was not only personal but profoundly professional, enabling him to seamlessly blend scientific rigor with integrity and commitment throughout his illustrious career.

Educational Milestones

Dr. Krishnaswamy Kasturirangan's educational journey is a story of perseverance, intellectual brilliance, and visionary preparation for leadership in both science and education. Born in Ernakulam, Kerala, in 1940, he completed his early schooling in Kerala, where a strong foundation in mathematics and physics was laid (Pillai, 2018). His academic excellence soon took him to Ramnarain Ruia College in Mumbai, one of the premier institutions of its time. Here, Kasturirangan developed a deep interest in physics and electronics, subjects that would define his future research (Nair, 2020).

After his undergraduate education, he pursued a Master's degree in Physics with specialization in Electronics at the University of Mumbai, showcasing exceptional analytical skills and a methodical approach to problem-solving. His quest for advanced knowledge led him to the prestigious Physical Research Laboratory (PRL) in Ahmedabad, often referred to as the "cradle of space science" in India. At PRL, under the mentorship of luminaries like Dr. Vikram Sarabhai, Kasturirangan completed his Ph.D. in Experimental High Energy Astronomy (Chakrabarti, 2019). His doctoral research focused on cosmic rays and X-ray astronomy, cutting-edge fields at the time, and established his reputation as a scientist of international calibre.

Dr. Kasturirangan's education extended beyond academic degrees; it included rigorous scientific training, interdisciplinary exposure, and an ethos of

national service. Educator Prof. Anil Sahasrabudhe noted that this blend of technical expertise and societal vision was reflected later in his leadership at ISRO and his contributions to educational policy-making (Sahasrabudhe, 2020).

Later, recognizing the need for administrative and policy skills, Kasturirangan undertook specialized training in management and strategic planning at various international institutions, including leadership workshops at MIT and NASA (Rao, 2020). This global exposure enriched his scientific thinking and administrative capabilities.

His educational milestones culminated in an honorary D.Sc. from several Indian universities, recognizing his outstanding contributions to science, space technology, and education (Menon, 2019). Notably, his role as Chairman of the committee for drafting the National Education Policy 2020 shows how deeply his educational experiences informed his vision for India's learning systems—promoting flexibility, research orientation, and holistic development.

Thus, from Kerala's classrooms to India's national space and education programs, Kasturirangan's educational journey reflects a lifelong pursuit of knowledge, innovation, and public service. A dignitary of highest acumen, Dr. Kasturirangan is recipient of all the three Padma awards among many other prestigious awards. Long academic journey of Dr Kasturirangan's along with select awards received is mentioned in Table-1. List of his pathbreaking academic publications is given in Table: 2.

Kasturirangan's Vision for Education

Dr. K. Kasturirangan, a celebrated space scientist and educationist, envisioned an educational system for India that was both rooted in cultural heritage and oriented toward global excellence. His leadership in drafting the National Education Policy-2020 (NEP--2020) stands as a landmark contribution to modern Indian education (The Indian Express, 2025; Sahasrabudhe, 2020).

Kasturirangan believed that India's education system should move beyond rote learning and foster

Table -1 Select Academic Achievements and Awards of Dr. K. Kasturirangan

Year	Achievement / Award / Position	Details
1960s	M.Sc. in Physics	Specialization in Electronics from University of Mumbai
Late 1960s – Early 1970s	Ph.D. in Experimental High Energy Astronomy	Completed Ph.D. at Physical Research Laboratory (PRL), Ahmedabad
1970s–1990s	Major Role at ISRO	Worked in IRS and GSLV programs; became Director of ISRO Satellite Centre
1982	Padma Shri Award	Awarded by Government of India for excellence in space science
1992	Padma Bhushan Award	Awarded for distinguished contributions to science and engineering
1994–2003	Chairman, ISRO	Led India's major satellite programs and strategic space initiatives
2000	Padma Vibhushan Award	Awarded for outstanding achievements in science and technology
2000s	Chancellor, JNU	Served as Chancellor of Jawaharlal Nehru University, Delhi
2008	Chairman, Karnataka Knowledge Commission	Worked to enhance the knowledge and innovation sector in Karnataka
2010	Aryabhata Award	Received from the Astronautical Society of India
2015	Allan D. Emil Memorial Award	International recognition from the International Astronautical Federation
2017–2020	Chairperson, NEP 2020 Drafting Committee	Led the historic revision of India's National Education Policy
-----	Honorary D.Sc. Degrees, Fellowships	Conferred by more than 20 universities for his lifelong contributions, Lifetime Fellow of INSA, IAS, and NASI,

Source: https://en.wikipedia.org/wiki/Krishnaswamy_Kasturirangan

Table -2 Scholarly Publications Dr. Kasturirangan along with List of Journals

Year	Publication Type	Title/Description	Source
1969	Journal Article	Balloon observations on cosmic X-rays in 20–200 keV range	Journal of Geophysical Research
1971	Journal Article	Secondary background properties of X-ray astronomical telescopes at balloon altitudes	Journal of Geophysical Research
1972	Journal Article	Low energy atmospheric gamma rays near geomagnetic equator	Planetary and space Science
1973	Journal Article	Hard X-ray emission from HER X-1	Nature Physical Science
1976	Journal Article	X-ray observations of GX 17+2 and GX 9+9 from Aryabhata	Nature
1979	Book Chapter	The Aryabhata Project	Indian Academy of Sciences
1987	Book	<i>Perspectives in Communications</i> (Co-authored)	Pontifical Academy of Sciences
1992	Book Chapter	Space—In Pursuit of New Horizons	Indian Academy of Sciences
1995	Journal Article	Remote Sensing in India – Present Scenario and Future Thrusts	Journal of the Indian Society of Remote sensing
1996	Journal Article	Role of Developing Countries in Ground Based Experiments in Support of Space Observations	Advances in Space Research
1997	Journal Article	Problems of Space Science Research: Education and the Role of Teachers	Advances in Space Research
2000	Journal Article	<i>Ocean Research in India: Perspective from Space</i> (Co-authored)	Current Science
2000	Book Chapter	India's Space Efforts– Achieving Great Heights	Vision 21 st Century
2000	Journal Article	Developments in Indian Space Programme	Technorama
2004	Journal Article	Science and Technology of Imaging from Space	Current Science
2005	Journal Article	A New Space-based Observatory to Explore the Universe	Annals of the INAE
2006	Lecture Publication	India's Space Enterprise– A Case Study in Strategic Thinking and Planning	ISRO Publication
2007	Journal Article	On Coalition Governments	Journal of Constitutional and Parliamentary Studies
2007	Journal Special Issue	<i>Indian Space Programme– A Multidimensional Perspective</i> (Editor)	Current Science
2007	Journal Article	Space technology for humanity: A profile for the coming 50 years	Space Policy
2009	Book Chapter	The Emerging World Space Order: An Indian Perspective	Space security and Global Cooperation
2009	Lecture Publication	Space Odyssey: A Down to Earth Perspective	ISRO Publication
2021	Book	Space and Beyond: Professional Voyage of K. Kasturirangan	Springer
2022	Book	<i>Space and Beyond: Professional Voyage of K. Kasturirangan</i> (Paperback Edition)	Springer

Source from different Journals

critical thinking, creativity, multidisciplinary learning, and ethical reasoning. He emphasized that education should build character, instill scientific temper, and prepare students for real-world challenges. His vision included flexibility in curriculum, offering students choices across disciplines and multiple exit-entry options, thus catering to diverse interests and career pathways (The Indian Express, 2025; Sridhar, 2020).

Central to Kasturirangan's vision was the integration of Indian knowledge systems—including classical languages, arts, and traditional sciences—with modern subjects like artificial intelligence, coding, and environmental sustainability. He strongly advocated for education in the mother tongue at least until Grade 5, believing that early cognitive development is best nurtured through the language a child understands most deeply (NEP, 2020; Ramesh, 2021).

His work also highlighted the need for a holistic 5+3+3+4 school structure, replacing the outdated 10+2 system, aligning educational stages more closely with children's psychological and cognitive growth patterns. He stressed early childhood care and education (ECCE) as a fundamental right, proposing universal access to high-quality preschool education, recognizing that 85% of a child's brain development occurs before the age of six (The Indian Express, 2025; Chaturvedi, 2020).

Another cornerstone of Kasturirangan's educational philosophy was teacher training and capacity building. He advocated that teacher be seen as the heart of the educational process and called for continuous professional development, mentoring programs, and better working conditions to empower educators (NEP, 2020; Kumar, 2021).

Furthermore, his vision expanded to vocational education, aiming that by 2025, at least 50% of learners in schools and higher education would have exposure to vocational training. He believed that every student should acquire a skillset that makes them employable, entrepreneurial, and adaptable to changing economic landscapes (The Indian Express, 2025; Sridhar, 2020).

Kasturirangan also underscored the use of technology as a major enabler in education. His plan included the creation of digital repositories, online platforms for learning, and adaptive learning

technologies to bridge geographical divides, thus bringing quality education to rural and marginalized communities (Ramesh, 2021).

Equally important in his outlook was research and innovation. He proposed the establishment of the National Research Foundation (NRF) to promote a strong research culture across disciplines, not just in the sciences but also in the humanities and social sciences (Sahasrabudhe, 2020).

Dr. K. Kasturirangan envisioned a transformative approach to higher education in India, emphasizing flexibility, quality, and relevance to modern societal needs. Central to his vision was a strong foundation in science education, not just for producing scientists, but for fostering critical thinking, problem-solving, and innovation across disciplines (Sahasrabudhe, 2020). He emphasized that scientific temper must be cultivated early, with interdisciplinary exposure blending sciences, social sciences, and humanities to prepare students for a complex world (The Indian Express, 2025).

A major focus of his vision was vocationalization of education. Recognizing the need for an employable workforce, Kasturirangan proposed that by 2025, at least 50% of students should have exposure to vocational courses during their education (NEP, 2020). He advocated that vocational skills must be integrated seamlessly with academic learning, ensuring dignity of labor and reducing the gap between formal education and industry demands (Ramesh, 2021).

Multidisciplinary education was another cornerstone of Kasturirangan's policy framework. He stressed that institutions should evolve into multidisciplinary hubs, offering courses across sciences, arts, commerce, and technology, allowing students flexibility to design their own learning pathways. This approach encourages creativity, innovation, and holistic development rather than narrow specialization (Sridhar, 2020).

Kasturirangan also envisioned the creation of more autonomous colleges to promote innovation and academic excellence. He proposed granting high-performing colleges autonomy in curriculum design, assessment methods, and research initiatives, reducing bureaucratic control and encouraging diverse, locally relevant programs (Chaturvedi, 2020). This move was intended to empower institutions to experiment and respond quickly to evolving educational and societal needs.

The Academic Bank of Credits (ABC) system proposed under his leadership represents a radical shift towards flexibility in higher education. ABC would allow students to earn, accumulate, and transfer credits across institutions, enabling a modular, learner-centric model where one could pause and resume education as per personal and professional needs (NEP, 2020; The Indian Express, 2025).

Similarly, the Choice Based Credit System (CBCS), which Kasturirangan supported strongly, gives students the option to choose subjects across streams, allowing interdisciplinary combinations like Physics with Philosophy or Computer Science with Linguistics, breaking rigid academic silos (Kumar, 2021).

Understanding the growing need for experiential learning, he stressed the importance of internships as an integral part of the curriculum. According to him, every undergraduate student must undergo internships with local industry, businesses, artists, or research institutions to bridge the gap between theory and practice (Sahasrabudhe, 2020).

Finally, the transfer of credits — nationally and internationally — was a significant innovation proposed under his vision. Kasturirangan believed in a seamless education system, where students could transfer academic credits between institutions in India and abroad without bureaucratic hurdles, promoting mobility and global integration (NEP, 2020; Ramesh, 2021).

Dr. Kasturirangan’s educational reforms aimed to create a system that is flexible, skill-driven, multidisciplinary, student-centric, and globally competitive, while remaining deeply rooted in Indian ethos and traditions. His visionary ideas continue to shape India’s transition into a knowledge society ready for the challenges of the 21st century.

Dr. Kasturirangan’s educational vision was not just policy-oriented but deeply ethical. It aspired to create “good human beings”—individuals who are responsible, ethical, empathetic, and capable of leading India into a prosperous, inclusive future. His plan was rooted in constitutional values—liberty, equality, fraternity, and justice—thus making education a powerful tool for national integration and global citizenship (The Indian Express, 2025; Chaturvedi, 2020).

In sum, Dr. Kasturirangan visualized an Indian education system that was multidimensional, inclusive, holistic, flexible, and future-ready, blending ancient wisdom with modern innovation. His contributions will continue to guide India’s educational reforms for decades to come.

Kasturirangan’s Philosophy of Life

Dr. K. Kasturirangan’s philosophy of life was an extraordinary blend of scientific pursuit, ethical leadership, cultural rootedness, and national service. Born in a culturally rich Brahmin household in Ernakulam, Kerala, he grew up with values of discipline, humility, and devotion to knowledge (Menon, 2019). From a young age, Kasturirangan was taught that learning was a sacred duty, a principle that remained central throughout his life and career.

At the heart of Kasturirangan’s worldview was the principle of scientific temper—a belief that inquiry, rationality, and evidence-based thinking must guide not only science but also social progress (The Indian Express, 2025). Deeply influenced by his mentor Dr. Vikram Sarabhai, he embraced the idea that science should serve human welfare and national development, not merely intellectual curiosity. His tenure at ISRO, leading projects under difficult political and technological circumstances, reflected his belief in self-reliance, resilience, and ethical innovation (Sahasrabudhe, 2020).

Yet, Kasturirangan’s philosophy was not limited to scientific rationality. He strongly believed in the coexistence of tradition and modernity. As Sridhar (2020) notes, Kasturirangan emphasized that while India must adopt global scientific standards, it should never lose sight of its civilizational ethos, cultural heritage, and ethical roots. His advocacy for incorporating Indian knowledge systems into the National Education Policy (NEP–2020) exemplified this fusion of ancient wisdom with futuristic thinking.

A key aspect of his life philosophy was the importance of service and humility. Despite holding some of the most prestigious scientific and educational leadership positions in India, Kasturirangan remained remarkably modest and grounded. He viewed leadership as a responsibility for collective good rather than personal glory (Chaturvedi, 2020). His commitment to national causes—from space exploration to educational reforms—stemmed from a deep-seated belief that

individual achievement must always translate into societal benefit.

Another pillar of his philosophy was lifelong learning and adaptability. Even after retiring from ISRO, Kasturirangan continued to contribute actively to national missions in education, environment, and technology policy. As Kumar (2021) highlights, he saw education as a continuous journey of personal growth and nation-building, advocating learning ecosystems that remain dynamic and future-ready.

Ethics, for Kasturirangan, were non-negotiable. He believed that without ethical grounding, neither science nor education could truly serve humanity. His leadership during crises—such as the technological embargoes following India’s nuclear tests—showed his commitment to ethical decision-making under pressure (The Indian Express, 2025).

Finally, Kasturirangan was an eternal optimist. He believed that with integrity, scientific spirit, compassion, and perseverance, India could achieve greatness while uplifting every citizen. His life’s work was a testament to the idea that true progress lies in harmonizing material advancement with spiritual and cultural enrichment.

In sum, Dr. K. Kasturirangan’s philosophy of life integrated scientific rigor, cultural pride, ethical responsibility, service orientation, and visionary optimism. His legacy continues to inspire generations to pursue excellence with humility and purpose.

Dr. Kasturirangan’s Thoughts and the Vision of NEP–2020

The National Education Policy (NEP) 2020, developed under the leadership of Dr. K. Kasturirangan, represents a paradigm shift in India’s education system. It reflects his deep scientific temper, commitment to holistic development, and vision of building a knowledge-driven, equitable society. Kasturirangan’s thoughts on education, drawn from his scientific background and public service, deeply permeate the design of NEP.

Holistic and Multidisciplinary Education

NEP–2020 aims to move away from rote learning toward a holistic, multidisciplinary education encompassing arts, humanities, sciences, and vocational subjects (Ministry of Education, 2020).

Kasturirangan believed that education must nurture the full potential of a learner—intellectually, emotionally, ethically, and socially. He stressed that

siloes knowledge creates fragmented human beings, whereas multidisciplinary learning creates adaptable, creative, and socially responsible citizens (Sridhar, 2020).

Flexibility and Choice in Learning

A key feature of NEP–2020 is flexibility in curriculum and subject choices, allowing students to select courses based on their interests.

This mirrors Kasturirangan’s thought that personalized education pathways are essential for nurturing individual talents. He strongly supported Choice Based Credit Systems (CBCS) to provide academic freedom and cater to diverse student aspirations (Sahasrabudhe, 2020).

Promotion of Indian Knowledge Systems and Languages

NEP–2020 emphasizes integrating traditional Indian knowledge—like Ayurveda, classical arts, Indian philosophy—with modern disciplines. It also promotes education in the mother tongue up to Grade 5 (preferably Grade 8).

Kasturirangan valued India’s civilizational wisdom and argued that respecting one’s linguistic and cultural identity strengthens cognitive development and national pride (Ramesh, 2021).

Early Childhood Care and Education (ECCE)

NEP–2020 highlights ECCE as the foundation of lifelong learning, recognizing that 85% of brain development happens by age six.

Kasturirangan emphasized scientifically structured early education, blending play, discovery, and foundational skills. He believed ECCE is crucial to bridge learning gaps and build equity from the ground up (Chaturvedi, 2020).

Academic Bank of Credits (ABC) and Modular Learning

NEP–2020 introduces Academic Bank of Credits (ABC), enabling students to earn and transfer credits flexibly across different institutions and timelines.

Kasturirangan visualized education as a lifelong, modular journey, where learners should not be trapped in rigid degree structures but could pursue learning as per life demands (Ministry of Education, 2020).

Emphasis on Critical Thinking and Research

NEP–2020 promotes inquiry-driven, discovery-oriented pedagogy at all levels. It proposes

setting up a National Research Foundation (NRF) to boost research culture.

Reflecting Kasturirangan's scientific mindset, he emphasized that education must nurture curiosity, innovation, and independent thinking, making research a cornerstone even in undergraduate education (Sridhar, 2020).

Universalization of Education

The NEP-2020 seeks to achieve 100% Gross Enrolment Ratio across school and higher education by 2030.

Kasturirangan strongly believed that equity and inclusivity are non-negotiable for national progress. He envisioned removing barriers—social, economic, and geographical—to ensure *Education for All*, particularly marginalized groups (Sahasrabudhe, 2020).

Vocationalization of Education

The policy mandates that vocational education should be mainstreamed from Grade 6 onward, aiming that 50% of learners will have vocational exposure by 2025.

Kasturirangan thought that academic elitism must be broken and skills-based education must be respected and integrated to foster employability, dignity of labor, and economic relevance (Ramesh, 2021).

Teacher Empowerment

NEP-2020 calls for high-quality teacher training, continuous professional development, and career progression pathways.

Kasturirangan believed that teachers are the bedrock of any educational reform. Without empowering and respecting teachers, any policy is destined to fail (Chaturvedi, 2020).

Institutional Autonomy and Multidisciplinary Universities

NEP-2020 proposes creating multidisciplinary institutions and grants graded autonomy to institutions based on performance.

Kasturirangan championed autonomous, accountable institutions that could design curricula, research agendas, and innovative teaching methodologies without excessive bureaucratic control (Sridhar, 2020).

Globalization and Internationalization of Indian Education

NEP-2020 encourages global partnerships,

student exchanges, and even foreign universities setting up campuses in India.

Kasturirangan recognized that global exposure is critical for India's growth but must be rooted in Indian values. He envisioned Indian universities as global centers of excellence (Ramesh, 2021).

Lifelong and Online Learning

NEP-2020 promotes digital education, open and distance learning, and lifelong skilling programs to adapt to the needs of the knowledge economy.

Kasturirangan foresaw a future where technology democratizes access, making high-quality education available anytime, anywhere, to anyone willing to learn (Sahasrabudhe, 2020).

The vision of NEP-2020 is deeply embedded in Dr. Kasturirangan's thought. It reflects his scientific rigor, commitment to social inclusion, belief in lifelong learning, and respect for India's cultural roots. It presents a dynamic framework—balancing flexibility with excellence, tradition with innovation, and equity with quality.

Through NEP-2020, Kasturirangan offers India a blueprint for creating global citizens with Indian hearts—learners who are critical, ethical, skilled, and deeply connected to their community and world.

Aims of Education According to Dr. Kasturirangan Vis a Vis NEP-2020

The National Education Policy (NEP) 2020, crafted under the leadership of Dr. K. Kasturirangan, redefines the aims of education in India for the 21st century. It marks a significant departure from earlier approaches by emphasizing holistic development, flexibility, multidisciplinary learning, inclusion, research, values, and global readiness. Dr. Kasturirangan's vision, deeply rooted in scientific inquiry, ethical responsibility, and cultural rootedness, is reflected throughout NEP-2020.

Development of the Full Potential of the Learner

Both Kasturirangan and NEP-2020 emphasize that the fundamental aim of education is to develop the full potential of every individual (Ministry of Education, 2020).

According to Kasturirangan, education must nurture the intellectual, social, emotional, ethical, and physical dimensions of learners (Sridhar, 2020). He viewed education as a process of complete self-realization, not just skill acquisition.

NEP–2020 reflects this by proposing curricula that foster critical thinking, creativity, scientific temper, communication skills, and ethical reasoning from early childhood to higher education. (Sridhar, 2020; Ministry of Education, 2020)

Cultivation of Scientific Temper and Innovation

Kasturirangan, as a scientist, insisted that scientific inquiry and innovation should be the hallmarks of the educational process. He believed education must encourage experimentation, questioning, problem-solving, and creativity (Sahasrabudhe, 2020).

NEP–2020 upholds this vision by embedding inquiry-based learning at all stages and setting up a National Research Foundation (NRF) to strengthen research in both sciences and humanities. (Sahasrabudhe, 2020; Ministry of Education, 2020)

Promotion of Constitutional Values and Ethics

For Kasturirangan, education was incomplete without ethical development. He stressed that education must inculcate values such as truth, peace, non-violence, empathy, tolerance, and respect for diversity (Chaturvedi, 2020).

NEP–2020 formalizes this goal by aiming to foster constitutional values like democracy, equality, and justice through the curriculum and teaching practices. (Chaturvedi, 2020; Ministry of Education, 2020)

Empowerment through Multidisciplinary and Flexible Learning

Kasturirangan envisioned education as broad-based and multidisciplinary, allowing students to combine disciplines according to their interests and passions.

NEP–2020 operationalizes this through flexible curricula, multiple entry-exit options, the Academic Bank of Credits (ABC), and strong promotion of liberal arts education (Ramesh, 2021).

The aim is to equip learners for multiple careers and help them become versatile individuals who can adapt to rapidly changing global demands. (Ramesh, 2021; Ministry of Education, 2020)

Bridging the Gap between Knowledge and Skills

Both Kasturirangan and NEP–2020 emphasize that education must blend academic knowledge with practical skills.

Kasturirangan believed that traditional divides between vocational and academic education were artificial and harmful (Sridhar, 2020). Vocational training should be integrated into the mainstream to promote employability, dignity of labour, and innovation 2020 echoes this by proposing vocational education exposure from Grade 6 onward, aiming for 50% student participation in vocational learning by 2025 (Sridhar, 2020; Ministry of Education, 2020)

Building Global Citizens with Indian Roots

Kasturirangan envisioned education that would create global citizens who are deeply rooted in Indian culture, heritage, and languages.

NEP–2020 seeks to internationalize Indian education through academic collaborations and student exchanges while emphasizing the learning of Indian languages, traditional knowledge, and cultural values (Mukherjee, 1994).

Thus, the aim is a balanced identity—proudly Indian, yet globally competent. (Mukherjee, 1994; Ministry of Education, 2020)

Early Childhood Care and Education (ECCE) as the Foundation

Recognizing the importance of the first six years of life for cognitive and emotional development, Kasturirangan stressed the need for high-quality early childhood education (Chaturvedi, 2020).

NEP–2020 aims to achieve universal access to ECCE through strengthened Anganwadis, preparatory classes, and structured curricula based on play, discovery, and activity-based learning. (Chaturvedi, 2020; Ministry of Education, 2020)

Equity and Inclusion in Education

Kasturirangan strongly advocated that education must reach all sections of society—especially historically marginalized groups, rural populations, and economically weaker sections (Sahasrabudhe, 2020).

NEP–2020 reflects this commitment through measures like Gender Inclusion Funds, Special Education Zones, and targeted scholarships, aiming for inclusive and equitable quality education for all.

Lifelong Learning and Adaptability

According to Kasturirangan, education must cultivate lifelong learners who continually reskill and adapt to emerging opportunities and challenges (Ramesh, 2021).

NEP–2020 encourages this by promoting adult education programs, online learning platforms, and continuous skilling initiatives through a dynamic and open educational ecosystem.

Curriculum According to Dr. Kasturirangan

Dr. K. Kasturirangan, the chairman of the committee responsible for drafting the National Education Policy (NEP) 2020, proposed a revolutionary vision for the Indian curriculum that moves beyond rote learning, narrow specialization, and rigid structures. His vision reimagines curriculum as a dynamic, flexible, multidisciplinary, and learner-centric framework designed to build not just academic excellence but also creativity, ethical grounding, adaptability, and holistic personal development (Ministry of Education, 2020). According to Kasturirangan, a curriculum must nurture the intellectual, social, emotional, physical, ethical, and cultural aspects of students to help them realize their full potential as responsible, capable citizens of a globalized world (Sridhar, 2020). In his view, a 21st-century curriculum must prepare learners to thrive in a fast-evolving knowledge economy while also remaining deeply rooted in India's civilizational ethos (Ramesh, 2021).

A fundamental feature of Kasturirangan's curriculum vision is holistic and multidisciplinary education. He emphasized that subjects like sciences, arts, humanities, mathematics, sports, and vocational education must no longer exist in isolated compartments. Instead, they should intersect and enrich one another, encouraging students to discover connections across diverse fields (Ministry of Education, 2020). For example, students should be able to pursue physics alongside philosophy, or economics alongside music, without any stigma. This flexibility is intended to create versatile thinkers and problem-solvers who can adapt to interdisciplinary challenges in real life. Further, Kasturirangan proposed a flexible curricular structure where students have the freedom to design their learning pathways based on their passions and aspirations. This vision is embodied in the Choice Based Credit System (CBCS), which allows for horizontal and vertical mobility across disciplines (Sahasrabudhe, 2020).

Competency-based learning lies at the heart of Kasturirangan's curriculum reforms. He argued that education must shift from being content-heavy to competency-driven, meaning the focus should be on developing the ability to apply knowledge creatively

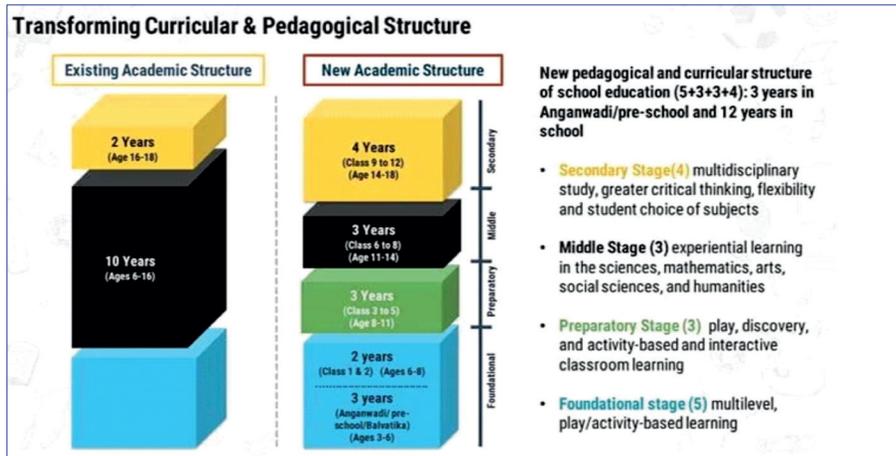
and critically rather than merely memorizing facts (Ministry of Education, 2020). To foster this shift, the curriculum should emphasize analytical thinking, problem-solving, innovation, and communication skills right from the foundational years. He also proposed that foundational literacy and numeracy should be the immediate priority for young learners, targeting universal proficiency by Grade 3. According to him, without mastering basic reading, writing, and arithmetic, no higher-order learning is possible (Chaturvedi, 2020). Thus, the early years of schooling must focus sharply on these essential competencies, delivered through joyful, play-based, and discovery-oriented pedagogies.

One of Kasturirangan's major contributions is the restructuring of the school curriculum into a 5+3+3+4 pattern, replacing the outdated 10+2 system. This new design aligns education stages with children's cognitive development patterns (Ministry of Education, 2020). The Foundational Stage (ages 3–8) covers play-based learning, the Preparatory Stage (ages 8–11) focuses on building literacy and numeracy, the Middle Stage (ages 11–14) introduces conceptual learning across disciplines, and the Secondary Stage (ages 14–18) emphasizes multidisciplinary, critical thinking, and research-oriented learning. This structure is designed to respect and support the psychological growth of learners, thereby making education more natural and meaningful (Figure-1).

Kasturirangan also insisted on embedding Indian knowledge systems into mainstream curricula. He emphasized that India's contributions to fields such as mathematics, astronomy, philosophy, medicine, architecture, and literature must not be neglected. Instead, students should be exposed to ancient Indian intellectual traditions alongside modern global knowledge, creating a strong sense of cultural pride and continuity (Ramesh, 2021). In this way, education becomes a tool for both modernization and cultural preservation. Simultaneously, he advocated the promotion of multilingualism, suggesting that students must learn in their mother tongue or home language at least up to Grade 5 and preferably till Grade 8 to strengthen cognitive abilities and deepen their engagement with learning (Ministry of Education, 2020).

Another critical dimension of Kasturirangan's curriculum vision is the mainstreaming of vocational education. He strongly believed that vocational skills should not be perceived as inferior to academic

Figure -1 Transforming Curricula and Pedagogical Structure



Source : https://www.education.gov.in/sites/upload_files/mhrd/files/NEP_Final_English_0.pdf

streams but must be integrated into school and college curricula from early stages (Sridhar, 2020). Vocational training in areas such as carpentry, coding, agriculture, design, and entrepreneurship must become part of every learner’s experience to ensure employability, dignity of labour, and economic relevance. By 2025, NEP–2020 envisions that 50% of all learners will have exposure to vocational education, a goal deeply inspired by Kasturirangan’s pragmatic approach to education for life and livelihood.

A remarkable innovation proposed by Kasturirangan is the Academic Bank of Credits (ABC). Under this system, students earn and store academic credits from various recognized institutions and can transfer them flexibly to complete their degrees (Ministry of Education, 2020). This modular system makes education more flexible and learner-centric, allowing for breaks, transfers, interdisciplinary exploration, and life-long learning, dismantling the rigid, one-size-fits-all models that traditionally dominated Indian higher education.

In terms of pedagogy, Kasturirangan promoted inquiry-driven, discovery-oriented, learner-centric approaches to replace rote learning and mechanical examination practices (Sahasrabudhe, 2020). He believed that education must foster curiosity, imagination, creativity, and critical questioning. Project-based learning, internships, community participation, and collaborative assignments are some of the methods he recommended to embed deeper learning and application skills across all levels of education.

Furthermore, ethical reasoning and constitutional values must be integral to curriculum design, according to Kasturirangan. He envisioned

a curriculum that would nurture not just intelligent minds but also compassionate hearts and responsible citizens (Chaturvedi, 2020). Topics like environmental responsibility, gender equality, social justice, civic duties, and empathy must be woven into everyday learning rather than treated as isolated subjects. This ethical underpinning ensures that education not only creates competent professionals but also socially conscious human beings.

Technology integration is another pillar of Kasturirangan’s curriculum reforms. He insisted that digital literacy, coding, and awareness of emerging fields like artificial intelligence must be incorporated from early schooling (Ramesh, 2021). Moreover, online education platforms, virtual labs, blended learning models, and e-content repositories must become essential parts of the curriculum infrastructure, democratizing access to quality education.

Finally, Kasturirangan’s curriculum vision stresses the need for continuous, formative assessment instead of high-stakes board examinations (Ministry of Education, 2020). Assessments should measure competency, creativity, and critical thinking rather than memorization. He also proposed periodic health and wellness check-ups and career counselling sessions to support the holistic growth of students.

In conclusion, Dr. K. Kasturirangan’s vision of curriculum is profound, progressive, and rooted in both tradition and innovation. His ideas reflect a deep understanding that curriculum is not merely about knowledge delivery but about shaping the mind, character, and destiny of learners. His reforms under NEP–2020 aim to create learners who are multidisciplinary thinkers, critical problem-solvers, ethically grounded leaders, culturally rooted citizens, and global innovators. Through this visionary curriculum framework, Kasturirangan has laid the foundation for a future-ready, inclusive, dynamic Indian education system that balances excellence with equity, tradition with modernity, and individual achievement with societal well-being. □

(To be Contd. in next issue.....)

Advancing Educational Excellence and Institutional Quality: A Unified Approach for Achieving the Sustainable Development Goals

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Achieving academic excellence and institutional quality has become necessary in view of the rapid changes in societal needs, technological advancements, and environmental concerns have placed significant pressure on educational institutions to adapt and innovate. As a response, there is a growing recognition of the need for a unified approach that integrates intra-program alignment and institution-wide strategies to foster educational excellence while contributing to the Sustainable Development Goals (SDGs). This article presents such an approach, emphasizing the dual focus on programmatic and institutional levels to drive transformative change.

The Role of Higher Education in Global Sustainability

The global community is increasingly aware of the interconnectedness of environmental, social, and economic systems. This awareness underscores the urgency of rethinking traditional development paradigms and embracing sustainability as a core principle. Education plays a pivotal role in this shift, as recognized by the United Nations. Initiatives such as the Decade of Education for Sustainable Development and the Global Action Programme highlight education's critical role in fostering sustainable development. These initiatives aim to equip learners with the knowledge, skills, and attitudes necessary to address complex global challenges and contribute to a sustainable future. Higher education institutions are uniquely positioned to act as catalysts for this transformation. By embedding sustainability principles into their curricula, governance, and operational practices, these institutions can influence societal norms and behaviors, thereby contributing to the broader sustainability agenda. The 7th point of SDG 4 explicitly emphasizes the importance of education in promoting sustainable lifestyles, human rights, equity, and global citizenship. This highlights the necessity for educational institutions to align their

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objectives with the SDGs, thereby ensuring that their graduates are well-prepared to navigate and address the multifaceted challenges of the 21st century.

Programmatic Strategies for Educational Excellence

At the programme level, achieving educational excellence requires a comprehensive approach that integrates curriculum alignment, faculty development, standardized assessments, student-centric learning, and technology integration. Each of these components plays a crucial role in enhancing the quality of education and ensuring that students acquire the competencies necessary for success in a rapidly changing world.

Institutional Strategies for Transformative Change

At the institutional level, achieving educational excellence requires a strategic and holistic approach that encompasses strategic planning, interdisciplinary initiatives, quality assurance mechanisms, industry partnerships, and robust infrastructure. These strategies are essential for creating an enabling environment that supports academic excellence and sustainability.

The proposed unified approach to educational excellence is situated within the broader context of sustainability. Humanity's growing awareness of planetary limits and the urgency of rethinking development paradigms necessitate a transformative shift in education. By integrating the principles of Education for Sustainable Development (ESD) into their strategies, institutions can play a pivotal role in advancing the SDGs. Education is a cornerstone of sustainable development, as it equips individuals with the competencies required for civic engagement, economic resilience, and environmental stewardship.

Curriculum Alignment: Ensuring Coherence, Relevance, and Sustainability

Curriculum alignment is a strategic process that ensures educational programs are coherent,

relevant, and aligned with both institutional goals and global standards. A well-aligned curriculum integrates core institutional objectives with broader societal and environmental considerations, fostering a holistic learning experience. This approach is particularly critical as the world grapples with complex challenges like climate change, social inequality, and economic instability.

Planning and Structuring the Curriculum

Defining Program Educational Objectives (PEOs), Program Outcomes (POs) and Course Outcomes (COs)

The SDGs can be seamlessly integrated into defining PEOs, POs and COs by aligning the program's vision with global priorities such as sustainability, equity, and innovation. Incorporating SDGs ensures that PEOs address pressing societal and environmental challenges, fostering graduates who are socially responsible, environmentally conscious, and equipped to contribute to sustainable development. This alignment enhances the program's relevance by preparing students to tackle contemporary global issues while promoting interdisciplinary learning and ethical practices. Embedding SDGs into PEOs, POs and COs establishes a forward-looking framework that supports both local and global progress.

Mapping Program Outcomes (POs) and Course Outcomes (COs)

The implementation of outcomes related to SDGs can be effectively monitored through the systematic mapping of Program Outcomes (POs) and Course Outcomes (COs). By explicitly linking SDG-aligned objectives to specific POs and corresponding COs, institutions can track how each course contributes to sustainability-focused education. Assessment tools such as rubrics, performance indicators, and surveys can measure students' attainment of SDG-related skills and knowledge.

Stakeholder Involvement in SDG Aligned Curriculum Design

Effective curriculum design requires input from various stakeholders:

- i. Industry Input:** Industry collaboration ensures the SDG-aligned curriculum incorporates emerging trends, sustainable practices, and technical advancements that address global challenges,

equipping graduates with relevant skills for green jobs and responsible innovation.

- ii. Alumni Feedback**

Alumni insights highlight how well the curriculum prepared them for sustainability-focused roles, identifying gaps in SDG-related competencies and suggesting improvements for aligning educational outcomes with real-world demands.

- iii. Student Feedback**

Current students' feedback identifies opportunities to enhance SDG integration in content, teaching methods, and resources, ensuring the curriculum remains engaging, relevant, and responsive to sustainability priorities and student aspirations.

Integrating Interdisciplinary and Soft Skills Components

Including interdisciplinary courses fosters a holistic understanding of SDG challenges, integrating perspectives from science, technology, social sciences, and humanities to address complex global issues. Training in communication, teamwork, and problem-solving equips students to collaborate effectively, innovate sustainably, and lead initiatives aligned with SDGs, ensuring their contributions are impactful and globally relevant.

Incorporating Experiential Learning

Experiential learning components like internships, projects, and case studies can be designed around SDG themes, such as sustainability, social equity, or innovation. Internships in green industries, community-based projects addressing local challenges, and case studies on global SDG initiatives provide students with practical insights and hands-on experience. This approach nurtures problem-solving skills and instills a commitment to sustainable development while fostering engagement with real-world challenges.

Refining the Curriculum Using Periodic Reviews for SDG Alignment

- i. Establishing a Review Framework**

A diverse Curriculum Review Committee ensures SDG integration by incorporating multi-stakeholder perspectives, promoting inclusivity, and addressing global sustainability challenges.

ii. Using Student-Level Attainment Data for Review

- a. **Defining Key Metrics:** Track student progress in SDG-related competencies like ethical decision-making, sustainability awareness, and problem-solving.
- b. **Assessment Tools:** Use SDG-focused projects, surveys, and exit interviews to evaluate students' grasp of sustainability concepts.
- c. **Gap Analysis:** Identify discrepancies in SDG-related outcomes and refine courses accordingly.

iii Incorporating Feedback Loops

Continuous feedback ensures SDG elements are progressively enhanced, keeping pace with evolving global priorities.

iv. Aligning with Accreditation Standards

Alignment with SDG-related benchmarks in accreditation standards ensures credibility and fosters global recognition.

Leveraging Technology for Curriculum Review

Modern tools like Learning Management Systems (LMS) and Outcome-Based Education (OBE) software facilitate efficient tracking of student performance in SDG-related activities, projects, and assessments, ensuring alignment with desired outcomes. OBE tools further enhance this by mapping COs to POs using SDG-specific indicators, providing detailed analytics on student progress in achieving sustainability goals. These technologies offer insightful visualizations of attainment gaps, supporting data-driven adjustments to curriculum content and pedagogy. By leveraging these tools, institutions can ensure that SDG priorities are systematically integrated and remain a central focus of the curriculum, driving continuous improvement and relevance.

Faculty Development: A Pillar for Academic Excellence and Innovation

Faculty development programs can be aligned with SDGs by incorporating training on sustainability concepts, interdisciplinary teaching approaches, and the use of technology to address global challenges. Workshops on integrating SDG themes into curriculum design enable faculty to embed sustainability into their courses. Collaborative initiatives, such as partnerships with industry and

NGOs, provide faculty with practical exposure to SDG-related projects. Programs focusing on equity, diversity, and inclusion equip faculty to foster inclusive learning environments. Continuous training ensures faculty are well-prepared to disseminate SDG knowledge effectively, inspiring students to become active contributors to sustainable development.

Standardized Assessments: Ensuring Accountability and Holistic Learning

Incorporating sustainability-related competencies into standardized assessments is a powerful tool for systematically integrating SDG priorities into the curriculum and ensuring they remain a central focus in teaching and learning. A well-designed standardized assessment framework not only ensures consistency and fairness but also provides an effective mechanism for evaluating students' understanding and application of SDG concepts. By aligning assessments with sustainability goals, institutions can evaluate not only academic knowledge but also critical skills such as ethical reasoning, problem-solving, and responsible decision-making. Developing a robust assessment framework that incorporates sustainability competencies involves designing clear guidelines for both formative and summative assessments. Rubrics can be designed to assess students' ability to critically engage with sustainability challenges, evaluate solutions, and propose innovative approaches for sustainable development. Peer reviews and moderation practices ensure that assessments are objective and aligned with institutional standards, fostering a culture of collaboration among faculty while maintaining academic integrity. Regular reviews of assessment practices based on feedback from students, alumni, and external examiners ensure continuous improvement, keeping the curriculum relevant and adaptive to evolving global challenges. By integrating sustainability-related competencies into standardized assessments, institutions create a comprehensive framework that prepares graduates to address complex global issues, fosters a culture of sustainable development, and drives the continuous improvement of both the curriculum and teaching practices. This approach aligns with SDGs by producing graduates who are equipped with the knowledge and skills to contribute meaningfully to global sustainability efforts.

Student-Centric Learning: Empowering and Engaging Learners

To align student-centric learning with SDG priorities, institutions must integrate sustainable

development concepts into active learning strategies, ensuring that SDGs remain central to both curriculum design and teaching methods. By using Problem-Based Learning (PBL), students can engage with real-world sustainability challenges, such as designing affordable renewable energy solutions or developing sustainable urban systems. These tasks not only foster critical thinking but also empower students to apply theoretical knowledge to global issues, building both technical expertise and soft skills essential for SDG-driven solutions. Case studies can further enrich learning by exposing students to complex sustainability challenges in diverse sectors, prompting them to analyze, strategize, and make decisions with global implications. Collaborative projects, involving teamwork on SDG-focused initiatives, enhance students' ability to collaborate effectively while addressing key global issues, like climate change or poverty alleviation.

For successful integration, the curriculum should be designed to incorporate these active learning strategies while emphasizing SDG goals. Technology can be leveraged to create interactive, personalized learning experiences that make SDGs accessible and relatable. Continuous feedback loops from students will help refine these methods, ensuring they remain relevant and effective. By embedding SDGs into student-centric learning, institutions not only prepare students for future challenges but also foster a culture of continuous improvement, innovation, and global responsibility.

Technology Integration: Revolutionizing Modern Education

Technology integration in education offers immense potential to align with and promote Sustainable Development Goals (SDGs) by enhancing teaching, learning, and curriculum delivery. Learning Management Systems (LMS), such as Moodle, Blackboard, and Canvas, can serve as centralized platforms to embed SDG content into courses, ensuring consistency and accessibility while providing data analytics to track student progress on sustainability-related competencies. E-content development, including multimedia lectures, podcasts, and interactive modules, allows for greater flexibility and accessibility, enabling students to engage with SDG themes at their own pace. Virtual simulations and labs offer hands-on experiences, such as exploring renewable energy solutions or practicing ethical decision-making in real-world scenarios, bridging the

gap between theory and practical applications of SDG knowledge. Online assessment tools, adaptive learning platforms, and collaborative tools ensure personalized learning experiences that cater to diverse student needs, while promoting teamwork and collaboration for global challenges. Furthermore, data-driven decision-making via advanced analytics enables institutions to continuously refine the curriculum, teaching strategies, and resources to stay aligned with evolving SDG priorities. By embedding SDG principles across all technological facets of education, institutions can ensure that sustainability remains central to the learning experience, driving long-term impact and relevance for both students and faculty.

Institutional Strategies for Transformative Change: Strategic Planning

To effectively integrate SDG priorities into the institutional strategy, the planning process must be explicitly aligned with the goals of sustainability, innovation, and inclusivity. Defining the Vision of the institution should encompass a commitment to sustainable development, ensuring that all future initiatives are rooted in SDG values. The vision must reflect national and global sustainability priorities, ensuring that the institution becomes a leader in driving transformative change. Establishing Strategic Objectives should include specific SDG-related goals, such as integrating sustainability into the curriculum, enhancing research focused on global challenges, and promoting equitable access to education. These SMART objectives would provide clear targets to work towards, guiding all efforts towards sustainable growth. Benchmarking and Milestones can measure progress against global best practices in SDG implementation, identifying areas for improvement. Stakeholder Engagement is crucial to aligning all faculty, students, alumni, and industry partners with the SDG agenda, ensuring that there is a shared understanding of the institution's commitment to sustainable development. Resource Allocation and Capacity Building must prioritize investments in faculty development programs centered on SDG knowledge, interdisciplinary teaching methods, and technology. Regular Monitoring and Evaluation will ensure that SDG priorities remain central to the institution's operations, fostering continuous improvements in curriculum, teaching, and research. Flexibility in the strategy allows the institution to adapt to changing global contexts and emerging SDG challenges, maintaining relevance and impact.

Interdisciplinary Initiatives: Bridging Knowledge for Innovation

Higher education institutions can strategically align interdisciplinary initiatives with SDGs to create a curriculum that systematically incorporates sustainability, social equity, and global challenges. By designing programs that integrate multiple disciplines, such as combining environmental science with engineering or economics with public health, institutions can equip students with a comprehensive understanding of how different fields intersect with SDG priorities. Collaborative teaching models, where faculty from diverse disciplines co-create courses, enhance the learning experience by providing varied perspectives on issues like climate change, social justice, and sustainable development. Research and innovation opportunities in interdisciplinary centers focused on SDG-related themes, such as renewable energy or sustainable agriculture, enable students to apply integrated learning to real-world problems. This approach fosters critical thinking and collaborative problem-solving, key skills for addressing complex, global challenges.

Furthermore, interdisciplinary education develops transferable skills like adaptability, teamwork, and effective communication, which are crucial for students to become leaders in the evolving job market, particularly in sustainability-driven sectors. Experiential learning through projects that integrate multiple disciplines enables students to engage directly with SDG issues, ensuring their education is not only theoretical but also grounded in practical, real-world solutions. Institutional support, cross-disciplinary resources, and strong partnerships with industry and global organizations ensure that SDGs remain a central focus in both curriculum design and teaching, driving continuous innovation and relevance in higher education.

Quality Assurance Mechanisms

Ensuring Excellence in Higher Education: Aligning quality assurance mechanisms with SDG priorities enhances the integration of sustainability into every aspect of institutional functioning, ensuring that SDGs remain central to curriculum, teaching, and learning. Accreditation processes can incorporate sustainability criteria, requiring programs to demonstrate alignment with global SDG targets and promoting a culture of accountability for sustainability outcomes. Ranking participation provides a platform for institutions to benchmark their

SDG-related performance, encouraging the adoption of best practices in sustainability, inclusivity, and innovation. Internal Quality Assurance Cells (IQAC) can monitor SDG integration within academic offerings, ensuring that faculty and curricula evolve in response to emerging sustainability challenges. Continuous internal audits can assess how effectively SDG themes are being embedded in teaching, research, and community engagement. Feedback mechanisms should collect data on student and stakeholder perspectives on SDG content and outcomes, allowing for timely course corrections. Benchmarking with peer institutions fosters sharing of successful sustainability initiatives and the adoption of cutting-edge practices. The integration of technology into quality assurance processes enables real-time monitoring of SDG outcomes, driving evidence-based decision-making. Finally, cultivating a culture of quality through training and workshops focused on SDGs ensures that faculty, staff, and students are all engaged in creating a sustainable academic environment, advancing both institutional and global sustainability goals.

Industry Partnerships

Bridging Academia and the Workforce: Industry partnerships play a crucial role in aligning academia with SDG priorities by ensuring that curricula, teaching methods, and student learning are relevant to global sustainability challenges. Institutions can integrate SDGs into internships and apprenticeships by offering students opportunities to work in sectors addressing sustainable practices, climate change, or social equity. Guest lectures and expert talks can focus on the latest advancements in green technologies, social entrepreneurship, and responsible business practices, inspiring students and faculty to incorporate sustainability into their work. Live projects and case studies can be directly linked to real-world SDG initiatives, allowing students to solve pressing societal and environmental issues. Collaborative R&D between academia and industry provides innovative solutions to SDG-related problems, promoting cutting-edge research on sustainability, renewable energy, and inclusive economic development. Skill development programs can focus on niche areas such as data analytics for sustainable development, ensuring students are prepared for future challenges. Community-based projects and service learning can directly contribute to local SDG goals, empowering students to work on social, environmental, and economic issues

within their communities. Finally, advisory boards can ensure that industry insights guide curriculum design, integrating SDG-related competencies and creating a responsive, forward-thinking educational framework. These initiatives collectively ensure SDGs remain central to the educational experience.

Robust Infrastructure: A Foundation for Excellence in Education

To effectively integrate SDG priorities, higher education institutions can align their infrastructure with sustainability goals, creating an environment that nurtures both academic excellence and global responsibility. Modern classrooms and learning spaces equipped with interactive technologies can facilitate the teaching of SDGs by enabling dynamic lessons on sustainability, climate action, and social equity. Comprehensive libraries and digital repositories support access to SDG-related research, offering students and faculty a wealth of resources for developing sustainable solutions. Advanced laboratories and research facilities promote hands-on experimentation, fostering interdisciplinary research that directly addresses global challenges such as clean energy and public health. Resilient IT infrastructure ensures that digital tools and platforms can efficiently support SDG-focused learning, research, and collaboration, while AI-driven educational tools personalize the learning experience, enabling students to engage with sustainability concepts at their own pace. Sustainability-focused design in buildings and green spaces reflects a commitment to environmental stewardship, reducing the institution's ecological footprint while educating students on responsible resource use. Inclusive and accessible facilities ensure that all students, regardless of ability, can engage with SDG-driven initiatives. By maintaining and upgrading infrastructure with a focus on SDG integration, institutions provide a conducive environment for continuous improvement, ensuring that sustainable development remains a central focus of the curriculum, teaching, and research activities.

Conclusion

In the rapidly changing global landscape, higher education institutions play a crucial role in addressing the complex challenges posed by the Sustainable Development Goals (SDGs). By adopting a holistic, unified approach, institutions can create an educational environment that not only drives academic excellence but also promotes sustainability at every level. Embedding

sustainability into both programmatic and institutional strategies ensures that SDG priorities are seamlessly integrated into the curriculum, teaching methodologies, and faculty development initiatives. At the programmatic level, aligning curriculum outcomes with SDGs, enhancing faculty expertise in sustainability, and using technology to track progress are essential for fostering a learning environment that empowers students to address global challenges. At the institutional level, incorporating SDG-focused policies into strategic planning, quality assurance, and infrastructure development provides a foundation for long-term impact and institutional resilience. The integration of these strategies guarantees that sustainability is not a peripheral concern but a central, driving force in academic practices. This approach positions institutions as catalysts for transformative change, equipping students with the knowledge, skills, and mindset necessary to become responsible global citizens. By harmonizing their academic and operational efforts with the SDGs, institutions can enhance educational outcomes while contributing meaningfully to the global pursuit of a sustainable future.

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Challenges on Implementing Multilinguistic Approach in Higher Education Institutions

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The National Education Policy (NEP) 2020, unveiled on July 29, 2020, aims to guarantee that everyone can access high-quality education to transform India's educational system and foster a thriving, knowledge-driven society. Dr. K. Kasturirangan, the former chairman of the Indian Space Research Organization (ISRO), chaired a group that drafted the policy, which was delivered to the Ministry of Human Resource Development (MHRD) in 2019. Designed to tackle the existing challenges within the Indian education landscape, NEP 2020 aspires to position India as a global knowledge leader. The best way for developing countries to enrich their skills and resources is by providing high-quality education and promoting multilinguistic approaches in HEIs, it ensures national integration through the knowledge exchange of diverse linguistic backgrounds.

The Multilinguistic Approach Outlined by NEP-2020

The term 'multilingualism' refers to communication using two or more languages. Cenoz and Genesee (1998) have noted that multilingualism could characterise individuals or entire societies. A multilingual approach indicates a methodology or strategy that involves utilizing and addressing a multilingual approach in various contexts. Fortanet-Gomez (2013) identified the two types of multilingualism commonly referred to as further classifications, such as social or societal multilingualism and individual multilingualism. NEP-2020 has been advocating for multilingualism and the value of language in education. This approach is heavily inspired by India's rich and diverse culture, reflected in its knowledge system and traditions. It promotes quality manifestation and instils knowledge, skills, and values by encouraging and implementing multilingualism in the classroom. This approach is often applied in various fields

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such as education, communication, technology and linguistics. The goal is to accommodate diverse linguistic backgrounds, promote inclusivity, and facilitate effective communication among speakers of different language communities. However, learners can learn fundamental skills better in their regional language/mother tongue. At an early age, their mother tongue or home language is crucial, which assists in developing their spoken ability and encourages them to use the bilingual approach. Furthermore, children learn a new language more quickly when interacting with local communities. In this regard, NEP-2020 has focused on the gap between the language spoken by children and the medium of teaching that needs to be bridged between them for their knowledge construction. In light of this, the policy mandates that until at least grade 5, and ideally until grade 8, the learners' mother tongue or native tongue serve as the teaching medium. Both public and private institutions have followed this strategy by implementing high-quality textbooks and teaching-learning practices, or materials so that students can think and speak about the subject matter.

Implementing multilingualism is necessary for learners' cognitive benefit in the teaching-learning process. However, considering all the advantages of implementing such a crucial approach in HEIs, there are some challenges to overcome. The main effort is to get funding from the state and central government to invest in recruiting many language teachers in all regional languages around the country. India has always had a conflict between regional and national languages. India has a diverse population with many ethnicities, languages, cuisine preferences, dress styles, traditions, and customs. The unique potential to comprehend different customs, cultures, and values that come with being multilingual improves one's understanding of their own. To support a multilingual approach and national integrity, the three-language formula will continue to consider the constitutional rights and aspirations of people and different areas. India also has an extremely rich literature in various classical languages, tribal languages, storytelling, poetry, and music preserved for pleasure and enrichment of posterity.

Review of Related Literature

This study was led by reviewing related literature on the challenges of implementing multilingual approaches in HEIs. Also, areas related to the subject were studied, and an in-depth literature review was made. The goal of related reviews was to provide clear and valid knowledge and to understand the multilingual approach in HEIs.

Ray (2021) revealed that the ability to learn basic skills more effectively in one's home tongue is recognized worldwide, and fluency in English is regarded as a prerequisite for success in the modern world. Mahapatra and Anderson (2023) recommend that in the classroom, language and learning complement each other to improve both schooling and society as a whole. This study assesses our framework's suitability for use in multilingual settings like India. Lightfoot et al. (2022) highlighted significant usage of language mixing in the classroom, particularly in English-related courses, and in contexts where instruction is conducted in both English and regional languages. Baker and Hüttner (2017) described different roles of English and other languages, different levels of recognition of multilingualism, and a sophisticated range of perceptions of language by stakeholders. Mizrahi-Shtelman and Drori (2023) concluded that multilingualism serves both as a field for organizational negotiation of identity and as a state for non-English-speaking higher education institutions in the country. Varghese and Devi (2022) reports that a person who speaks multiple languages is said to be multilingual since language is crucial to the growth of society, the nation, and the nation-building process. Multilingualism is an important imperative of progress shown through learning languages. Doiz et al. (2013) revealed that English-medium education is becoming increasingly and more common in bilingual universities like the University of the Basque Country in Spain, where multilingual internationalization is especially evident. Kandel (2020) remarked that in bilingual and multilingual settings, multilingual education is less implemented, and there is some tension regarding the relationship between ethnicity and language in students' minds, especially in multilingual contexts.

Research Questions

- i. What are the requirements for the implementation of a multilingual approach in HEIs?
- ii. What are the challenges in implementing a multilingual approach in HEIs?

- iii. How does the NEP 2020 support the promotion of a multilingual environment in HEIs?
- iv. What are the long-term societal benefits of implementing a multilinguistic approach in HEIs?

Materials and Methods

The present study employs a qualitative research approach that depends on the use of secondary data sources. The use of secondary data involves the collection and synthesis of information from credible and authentic sources such as:

- Government publications (e.g., reports from the Ministry of Education, NCERT and AICTE).
- Policy documents (e.g., NEP 2020 and related implementation reports).
- Academic journals and research articles (covering themes of multilingualism, pedagogy and higher education).
- Online databases and research repositories (including government websites and educational platforms like NPTEL, DIKSHA and Shodhganga).

This method was selected to thoroughly comprehend the multilinguistic approach, as suggested by the NEP-2020. The study is grounded on a theoretical perspective that critically reviews the body of research, government reports, policy documents, and academic research about the implementation and development of multilingualism in educational institutions, especially higher education. This method allows for a holistic review of the requirements, challenges, benefits, and strategies associated with the multilinguistic approach. According to Mizrahi-Shtelman and Drori (2023), the limited studies have addressed multilingualism and focused on specific ones rather than holistic multilingualism. Therefore, by providing a theoretical understanding with an inclusive perspective, this study made an effort to determine the challenges of implementing multilinguistic approach in HEIs.

Requirements for Implementation of the Multilinguistic Approach in HEIs

National Education Policy (2020) has focused on developing HIEs into a multi-diversified knowledge-centric hub while addressing India's treasure of language literature and global language perspectives. However, it suggests some crucial

approaches for enhancing HEI's perspective, such as:

- The 'Three-Language' formula needs to be implemented and promote multilingualism as well as national unity.
- Across the nation, Indian Sign Language (ISL) will be employed as a teaching method, and curriculum materials will be created specifically for students who are hard of hearing.
- The establishment of the National Institute for Pali, Persian, and Prakrit.
- The Indian Institute of Translation and Interpretation is to be established.

There is a significant need to implement multilingualism in HEIs to fulfil this transformation. NEP-2020 has introduced various approaches or strategies to reform higher education. One of the significant perspectives toward institutions is to revamp the multilingual approach throughout the institutions in India. It promotes establishing a multilingual environment irrespective of geographical background, whether it is learners or academicians who can actively participate in their academic or non-academic activity by demonstrating their collaborative effort to build a multidisciplinary environment. In teaching-learning practice, communication can be made through different languages, and various courses on language learning should be provided for the cognitive benefit of young learners, which, as an outcome, develops essential language skills and literacy. Suppose an institution has promoted diverse linguistic approaches in the classrooms. In that case, it will enrich the learner experience by considering innovative interacting styles, early reading, knowing modern literature, foreign languages, different cultural integration, values, and so on. Although this policy has suggested standardizing Indian Sign Language (ISL) across the country, implementing this innovative strategy requires curriculum and study materials to be developed. Hence, institutions should give importance to the beauty of classic languages and literature, which unite and represent India's diversified language community and identity. In addition, Gorter and Cenoz (2017) concluded that holistic approaches to language education policy and multilingual approaches need to replace more traditional approaches. Therefore, in HEIs, curriculum and courses need to be incorporated by addressing those valuable components of a

multilingual approach that reflect India's vibrant languages and literature and draw the connection between the beauty of India's cultural heritage and global integration.

Challenges in Implementing Multilinguistic Approach in HEIs

The policy emphasises that HEIs must adopt a multilingual strategy to advance accessibility, equity, and inclusion. Although the policy's objective is to promote educational inclusion, infrastructure, human resources, policy, and cultural factors are some of the barriers preventing its implementation in HEIs. Those key challenges are discussed in the following manner:

Shortage of Multilingual Faculty

A significant issue facing HEIs is the lack of faculty members who speak several Indian languages. Few teachers can teach specialized, technical, and complicated material in regional languages. This is because much of Indian higher education has been taught in English for decades, especially in disciplines like business, engineering, and medicine. The All India Survey on Higher Education (AISHE) (2021) reports that only 18% of faculty in Indian HEIs have formal training in multilingual pedagogy.

Inadequate Multilingual Learning Resources

Access to textbooks, e-learning resources, journals, and research articles in several Indian languages is necessary for higher education. However, the majority of scholarly materials are only accessible in English. Rural students might not have access to academic journals, e-learning resources, or textbooks in their native tongue. The All India Council for Technical Education (AICTE) report (2022) revealed that translating technical textbooks into regional languages is ongoing, but it is a slow process due to limited translators and subject matter experts.

Student Resistance and Language Divide

Students from private, urban, and English-medium schools may resist the use of regional languages in higher education because they believe it will limit their access to a barrier to global opportunities. English is regarded as the language of worldwide employment, career advancement, and opportunity, particularly in global labour markets. Common University

Entrance Test (CUET) 2023, conducted in 13 Indian languages, revealed that only 21% of students chose to write the exam in a regional language, while the rest preferred English.

Complexities in Designing Multilingual Curricula

It's difficult to create a curriculum that can be taught in several languages with ease while maintaining conceptual coherence. Confusion occurs from the usage of technical terms in some fields, such as engineering and medical, that have no equivalent in local tongues. AICTE report (2022) noted that the translation of engineering course materials into 11 regional languages required the development of a special 'Technical Terminology Dictionary'.

Assessment and Evaluation in Multiple Languages

Multiple-language assessments and exams are a major administrative burden, especially for technical education. The logistical challenges of creating multilingual question papers, guaranteeing linguistic parity, and preventing content ambiguity are also significant. Recently, a CUET (2023) exam papers were translated incorrectly in this case, which led to numerous student complaints about the exam.

Preservation of Linguistic Consistency

It can be challenging to maintain linguistic consistency across different language textbooks, tests, and e-learning systems. Different dialects are spoken in different parts of the country, and linguistic subtleties vary as well. Moreover, the UNESCO report (2022) on linguistic diversity in Education highlights India's linguistic diversity as a barrier to standardizing educational content.

Policy and Implementation Gaps

Policies on language use in HEIs are often imprecise, inconsistent, or poorly implemented. No fixed deadlines for implementing mother-tongue education in higher education. To guarantee accountability, it is necessary to establish precise, time-bound rules and keep an eye on adherence. State and central governments should regularly examine their progress.

Lack of Equity and Uniformity Across Institutions

Implementing multilingual education may be more challenging for HEIs in rural and semi-

urban settings than for those in urban ones. Rural areas have fewer resources for implementing multilingual education, even though their students are more likely to benefit from it. Some regions' linguistic diversity (such as the Northeast, which has several tribal languages) adds complications (Barbora, 2014). States like Assam and Manipur have over 10 indigenous languages, making it challenging to cater to all linguistic groups.

Although it has many challenges, the NEP-2020 vision for a multilingual approach in higher education is ambitious. Methodically addressing these obstacles, which range from student resistance, financial limitations, and policy clarity to faculty shortages and problems with content translation, is necessary. Sustained investments, robust policy direction, and technology assistance are necessary to overcome these obstacles. India can accomplish its objective of having a genuinely multilingual higher education system with the help of programs like IITI, AI-based translation, and teacher training.

NEP-2020 Supports the Promotion of a Multilingual Environment in HEIs

One of the main elements of India's NEP 2020 is establishing a multilingual environment in educational institutions. The strategy emphasises the value of multilingualism as a critical component in boosting social inclusion, cultivating cultural awareness and developing cognitive ability. Here are the key provisions on how NEP 2020 supports multilingualism:

Three-language Formula

The NEP 2020 suggests implementing the 'Three-Language Formula' in both school and higher education. Students must learn three languages, at least two of which must be native Indian languages. This policy aims to develop competency in the mother tongue, a regional language, and a global language. Additionally, it promotes early cognitive development by utilizing mother tongues or regional languages during the formative years of education.

Mother Tongue/Regional Language as a Teaching Medium

NEP 2020 states that until at least Grade 5 and ideally until Grade 8, the mother tongue or

native language must be used as the medium of instruction 'wherever possible'. Research demonstrating that pupils absorb concepts more efficiently in their home tongue supports this policy. However, the Annual Status of Education Report (ASER) (2023) and UNESCO (2022) report highlighted that students who receive education in their mother tongue tend to perform better academically.

Translation of Educational Content into Regional Languages

Developing high-quality textbooks and instructional materials in multiple Indian languages is a top priority for NEP-2020. Additionally, the policy requires translating and publishing educational materials in local languages using technology. To provide high-quality learning materials to students with different language backgrounds. The National Digital Library of India (NDLI) and Digital Infrastructure for Knowledge Sharing (DIKSHA) platforms provide free access to e-books, resources, and study materials in multiple regional languages.

Teacher Recruitment

NEP-2020 emphasised the necessity of recruiting a large number of language teachers. In many areas, there is currently a shortage of qualified language teachers. For instance, a report by the Ministry of Education in 'SAMAGRA SHIKSHA' indicated that many states face a deficit of language teachers, particularly for regional languages.

The Setting Up of the Indian Institute of Translation and Interpretation (IITI)

According to NEP 2020, the Indian Institute of Translation and Interpretation (IITI) shall be established to facilitate the translation of knowledge resources into different Indian languages. This institution will be essential in translating technical education materials into regional languages to comply with the three-language policy.

Promotion of Multilingualism Using Technology

The use of digital tools and Artificial Intelligence (AI) to facilitate multilingual learning and increase the accessibility of educational

resources in regional languages is emphasised in NEP 2020. Course materials are now available in multiple languages on digital learning platforms such as Swayam, e-PG Pathshala, and DIKSHA. Therefore, producing textbooks and other academic content in various languages takes less time when translations are automated.

Promotion of Classical and Tribal Languages

The goal of NEP-2020 is to preserve and advance India's traditional and endangered languages, especially its indigenous and tribal languages. It promotes their integration into the educational system to preserve linguistic diversity. Furthermore, 22 official languages are recognized by the Indian Constitution's Eighth Schedule, and NEP 2020 aims to offer educational opportunities in each of these languages.

In summary, NEP 2020 approaches multilingual education in a comprehensive, inclusive, and creative manner. The strategy aims to establish an inclusive and egalitarian educational system by encouraging mother-tongue instruction, including regional languages in higher education, and using AI for translation. India's dedication to linguistic diversity and inclusivity is demonstrated by the use of the three-language formula in regional languages. However, educators and legislators will need efficient preparation, sufficient funding, and capacity building for successful implementation.

Long-term Societal Benefits of Implementing Multilingual Approach in Higher Education

The NEP-2020 recommends using a multilingual approach in higher education to create a more inclusive, fair, and culturally dynamic educational system. By combining regional languages with English and encouraging social, cognitive, and economic advancement, India aims to close the linguistic gap. Beyond academic results, this strategy has societal benefits that impact employment, cultural preservation, cognitive development, and social cohesion.

As NEP-2020 envisions, HEIs adopting a multilingual approach have many societal advantages. By adopting the multilingual approach, India may attain social inclusion, educational justice, and cultural preservation while strengthening its position as a global knowledge economy. Despite ongoing difficulties, the long-term advantages, particularly in

Table-1: Societal Benefits of Implementing the Multilinguistic Approach in HEIs

Benefit	Explanation	Fact	Example
Enhanced Cognitive Skills	Promotes critical thinking and problem-solving.	UNESCO 2021: Mother-tongue learning improves cognitive skills.	Students perform better in mathematics when taught in native languages.
Equity & Inclusion	Reduces barriers for marginalised communities.	ASER 2022: Dropout rates reduced when taught in mother tongue.	AICTE's 11 regional language engineering courses.
Cultural Preservation	Protects linguistic and cultural heritage.	197 Indian languages are endangered (UNESCO).	Education in 22 official languages per NEP 2020.
Employment Growth	Multilingual skills increase employability.	The India Skills Report 2023 found that 30% of employers prefer hiring candidates proficient in multiple languages.	Google hires multilingual employees for customer support.
National Unity	Fosters unity through linguistic diversity.	CUET 2023 was conducted in 13 languages.	Students from diverse backgrounds accessed central universities.
Identity Development	Fostering a Sense of Belonging, Identity, and Cultural Pride.	UNICEF (2020) found that children educated in their native languages are likelier to engage in class discussions.	This enhances students' self-confidence and social belonging.

the areas of cognition, economics, and society, justify the implementation's necessary efforts.

Discussion

According to Doiz et al. (2013), it is crucial to critically examine the personal, social, cultural, political, and economic challenges associated with exposure to different languages to comprehend the multilingual context in higher education. The multilingual approach is familiar with the diversity of India's vast culture, literature, rich languages, and artistic treasures. Mizrahi-Shtelman and Drori (2023) have noted that multilingualism is an arena for discussing the organisational identity of HEIs, especially in countries where the local language is not English. It can be difficult to decide which regional language should be used as the medium of teaching because the majority of Bharat's languages have multiple dialects. NEP recommends that students be taught in their mother tongue, regional language, or local language until at least grade 5, but not until grade 8. To bridge the gap between the regional language and the linguistic medium, the central government and state governments make every effort. Appointing large numbers of language teachers or professionals to all the HEIs in the nation to overshadow those implementation challenges. The NEP recommends that all teaching-

learning practices use multilingual or bilingual teaching-learning material, which will play a major role in implementing this approach to achieving the ultimate success of diverse language-learning-centric HEIs.

Conclusion

NEP-2020 emphasises multilingualism and the treasures of Bharat's rich diversity through incorporating regional languages in teaching-learning practices. This study reveals that the implementation of the multilinguistic approach is prominent because it enlightens India's unity in diversity and integration of multilingual culture, cultural enrichment, and various literature, and makes learners adaptable to future citizens. Since the majority of Indian languages have multiple dialects, it might be difficult to decide which regional language should be used as the primary language of instruction. In addition, India is a bilingual nation where different faiths, castes, and customs coexist and strive for social, technological, and educational progress. However, learning the language leads to a sense of the various cultural heritages and ways of life as they meet people from other parts of Bharat. Therefore, HEIs should implement this significant approach by solving emergent challenges for the advancement or achievement of 21st century goals.

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Emerging Trends in Artificial Intelligence Applications to Education and Libraries

Anandam Durgaprasad*

‘Artificial Intelligence for all’ must be that everyone can take advantage of the technological revolution underway and access its fruits, notably in terms of innovation and knowledge’.

- UNESCO

Artificial Intelligence (AI) in education is transforming learning by personalizing education, automating tasks, and providing accessible learning experiences, ultimately aiming to enhance student engagement and improve learning outcomes. Artificial intelligence is enabling the development of invaluable services and taking part in more and more aspects of our lives. Built from data, hardware and connectivity, AI allows machines to mimic human intelligence such as perception, problem-solving, linguistic interaction or creativity. These technologies contribute to achieving the 2030 Agenda for Sustainable Development. However, these rapid changes raise major issues. UNESCO addresses these matters, from ethics of AI, AI in education, gender equality, to capacity building for governments and judiciary. Artificial Intelligence (AI) has the potential to address some of the biggest challenges in education today, innovate teaching and learning practices, and accelerate progress towards Sustainable Development Goals. AI systems and tools must have data privacy and security. Humans must be in the loop.

- **Learning:** AI systems and tools must be aligned to our collective vision for high-quality learning, including equity.
- **Teaching:** AI systems and tools must be inspectable, explainable, and provide human alternatives to AI-based suggestions; educators will need support to exercise professional judgment and override AI models, when necessary.
- **Formative Assessment:** AI systems and tools must minimize bias, promote fairness, and avoid additional testing time and burden for students and teachers.

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- **Research and Development:** AI systems and tools must account for the context of teaching and learning and must work well in educational practice, given variability in students, teachers, and settings.

The Role of Artificial Intelligence in Education

UNESCO’s mandate calls inherently for a human-centered approach to AI. It aims to shift the conversation to include AI’s role in addressing current inequalities regarding access to knowledge, research and the diversity of cultural expressions and to ensure AI does not widen the technological divides within and between countries. The promise of *‘Artificial Intelligence for All’* must be that everyone can take advantage of the technological revolution underway and access its fruits, notably in terms of innovation and knowledge. Within the framework of the Beijing Consensus, UNESCO developed Artificial Intelligence and Education: Guidance for Policy-makers to foster the readiness of education policy-makers in artificial intelligence. It aims to generate a shared understanding of the opportunities and challenges that AI offers for education, as well as its implications for the core competencies needed in the AI era. UNESCO also published AI competency frameworks for students and teachers to guide countries in supporting students and teachers to understand the potential as well as the risks of AI.

“I strongly believe in the need for stakeholders to understand the cyclical effects of AI and education. By understanding how different activities accrue, we have the ability to support virtuous cycles. Otherwise, we will likely allow vicious cycles to perpetuate.”

—Lydia Liu

The U.S. Department of Education (Department) is committed to supporting the use of technology to improve teaching and learning and to support innovation throughout educational systems. This report addresses the clear need for sharing knowledge and developing policies for “Artificial Intelligence,”

a rapidly advancing class of foundational capabilities which are increasingly embedded in all types of educational technology systems and are also available to the public. We will consider “educational technology” (edtech) to include both (a) technologies specifically designed for educational use, as well as (b) general technologies that are widely used in educational settings. Recommendations in this report seek to engage teachers, educational leaders, policy makers, researchers, and educational technology innovators and providers as they work together on pressing policy issues that arise as Artificial Intelligence (AI) is used in education.

The Role of Artificial Intelligence in Education is continuously becoming a game-changer for teachers along with transforming the traditional form of teaching methods. Here’s a look at how the importance of AI in **education** is reshaping the role of teachers in education:

Personalized Learning

It can provide a personalized learning experience to every student along with analyzing the student’s learning pattern, strengths, and weaknesses. Similarly, one of the uses of artificial intelligence in education can help teachers tailor the learning experience to meet the individual needs of each student.

Engagement

Moreover, AI-powered tools make the learning process more interactive for students, which can help keep students engaged. Different activities like games or simulations can be included to make the learning process more fun for your students.

Customized Feedback

Teachers can make use of AI in education to provide immediate and personalized feedback to students, helping them understand their mistakes and improve quickly.

Automated Grading System

Teachers can make their task of grading their students an easy and smooth process. AI can grade assignments and exams quickly and consistently, allowing teachers more time to concentrate on lesson planning and individual student needs. This is one of the best uses of artificial intelligence in education.

Task Automation

Routine administrative tasks can be automated with AI, allowing teachers to dedicate more time to teaching and less to paperwork. AI in education can streamline administrative tasks such as attendance, scheduling, and communication with parents, reducing the administrative burden on teachers.

Learning Gap Analysis

With the help of AI tools, teachers can easily identify learning gaps among students. Teachers can get access to detailed reports and insights into each student’s learning journey. By using these insights, educators can tailor their teaching strategies to meet the individual needs of their students, ensuring that no one is left behind. AI’s ability to process vast amounts of data quickly and accurately means that these gap analyses are more comprehensive and detailed than what would be feasible manually.

AI in Examinations

The role of AI in examinations is multifaceted, offering benefits such as automated grading, plagiarism detection, and the generation of personalized feedback. Teachers can reduce their administrative workload, allowing them to dedicate more time to student engagement and instructional improvement.

Smart Content

The involvement of AI is transforming education by making teaching materials more interactive and personalized. Digital textbooks and online modules can adjust to each student’s learning pace, enhancing the importance of AI in education.

Universal Access

Teachers can utilize the importance of AI in education to reach a wider audience and create an inclusive learning environment where every student has the opportunity to succeed. Furthermore, it can facilitate remote learning.

Enhanced Teaching

Teachers can analyze the effectiveness of teaching methods and offer suggestions for improvement, helping them to continually develop their skills. By integrating these AI capabilities, teachers can enhance their teaching methods, provide better

support to students, and manage their time more effectively.

Emerging Perspectives of AI in Education

Although the benefits of artificial intelligence in education have been widely recognized, a growing body of literature also points to its potential adverse effects. While AI tools can personalize learning, enhance student engagement, and support educators in administrative tasks, concerns remain about issues such as data privacy, algorithmic bias, over-reliance on technology, and the potential dehumanization of the educational experience. Some scholars argue that excessive use of AI may reduce opportunities for critical thinking, weaken human interaction in classrooms, and dampen student's learning and performance in the long run. These critical perspectives call for a more cautious and ethically informed integration of AI in educational systems.

The Future of AI in Education

Though there continues to be widespread debate over the pros and cons of deploying AI technology in the field of education, including the concerns about depersonalization and the ethical considerations cited above, there is an emerging consensus that the extraordinary range of current and future benefits will carry the day.

Role of Artificial Intelligence in Libraries

AI is increasingly being used in libraries to automate tasks, enhance user experience, and improve resource management. This includes using AI-powered chatbots for instant assistance, recommending relevant resources based on user preferences, and streamlining workflows like cataloging and inventory management. AI also plays a role in accessibility, digitization, and digital preservation efforts.

Modern libraries are significantly impacted by Artificial Intelligence (AI), which is changing many areas of the services, operations, and user experiences offered by libraries. Some of the main facts are here:

- **Curation and Recommendation Systems:** Under this, personalized suggestions are generated by AI algorithms that analyze user preferences, borrowing histories, and reading habits. These tools make it easier for users to quickly find suitable books, articles, and other resources.

- **Information Retrieval:** Based on artificial intelligence search engine algorithms improve the way that information is found in databases and library catalogs. By understanding and handling user queries, Natural Language Processing (NLP) approaches increase search accuracy.
- **Digital Archives and Preservation:** In library collections, AI helps with rare and delicate material preservation, digitization, and indexing. Searchable text may be extracted from scanned documents using optical character recognition (OCR) technology, and digital archives can be categorized and arranged with the use of AI algorithms.
- **Chatbots and Virtual Assistants:** AI-driven chatbots and virtual assistants are used by libraries to assist patrons instantly, respond to questions, and direct them toward the resources and services available. These virtual agents are always available, which makes them more accessible to customers.
- **Text Analysis and Data Mining:** Text mining and sentiment assessment are two AI techniques that let libraries gather useful data from huge quantities of textual material. These findings are used by librarians for user behavior analysis, scholarly research, and collection creation.
- **Content Creation and Generation:** Artificial intelligence (AI) technologies enhance the creation of content through the creation of metadata, abstracts, or summaries for reference materials. By automating monotonous methods, these tools allow librarians to devote more of their time to more strategic endeavors.
- **Accessibility Services:** AI helps improve the accessibility of library materials for people with disabilities. AI-powered software, for example, can help visually impaired people navigate digital interfaces and convert text to speech.
- **Predictive Analytics for Collection Management:** Predictive analytics is used by libraries to plan ahead for resource demand, improve collection development tactics, and effectively handle inventories. AI systems use

usage trends and outside variables to inform their data-driven choices.

- **Security and Fraud Detection:** Artificial Intelligence (AI) is used in libraries to improve security measures like fraud detection, access control system monitoring, and cyber asset protection.
- **Language Translation Services:** AI-powered translation systems are used by libraries with multilingual collections to provide resources in several languages, making them more accessible to a wider range of users.

AI-Powered Recommendation System in Libraries

Artificial Intelligence (AI) integration has brought in a revolutionary era for modern libraries, especially with the use of recommendation systems. By analyzing user behaviour, preferences, and library resources, these systems make personalized recommendations to improve user experience and speed up resource discovery. They achieve this by utilizing sophisticated algorithms and machine learning.

Personalization and User Engagement

Recommendation systems employ sophisticated algorithms, such as collaborative filtering and content-based filtering, to analyze user behaviour and preferences. By understanding individual user interests, librarians can offer a personalized library experience, thereby increasing user engagement.

Content-based Filtering

Content-based filtering, a common technique in recommendation systems, involves suggesting items based on their similarity to what the user has shown interest in previously. AI algorithms analyze the content of resources and match them to users' historical preferences, delivering more relevant recommendations.

Collaborative Filtering

Collaborative filtering relies on analyzing user behaviour and preferences to make recommendations.

Hybrid Recommendation Systems

Many recommendation systems in libraries adopt a hybrid approach, combining content-based and collaborative filtering techniques. This

hybrid model leverages the strengths of both methods, providing more accurate and diverse recommendations tailored to individual user profiles.

Improved Resource Discovery

AI-powered recommendation systems contribute significantly to resource discovery in libraries. By guiding users to relevant materials they might not have discovered otherwise, these systems optimize the use of library collections and enhance the overall quality of information retrieval.

User Feedback Integration

To continually refine recommendations, AI systems often integrate user feedback. Librarians can gather information on users' satisfaction with suggested resources, allowing the system to adapt and improve its accuracy over time.

Ethical Considerations

Librarians deploying AI-powered recommendation systems must address ethical considerations, including transparency in how recommendations are generated and mitigating biases that may inadvertently affect suggestions. Transparency ensures user trust, while bias mitigation fosters inclusivity.

Real-time Assistance for Patrons

Real-time assistance for patrons refers to the provision of immediate and interactive support or information to individuals, commonly in a customer service or helpdesk context. This type of assistance is often facilitated through various technologies and communication channels to address patrons' needs promptly.

Significance of Ethics in AI

The rapid rise in artificial intelligence (AI) has created many opportunities globally. However, these rapid changes also raise profound ethical concerns. These arise from the potential AI systems have to embed biases, contribute to climate degradation, threaten human rights and more. Such risks associated with AI have already begun to compound on top of existing inequalities, resulting in further harm to already marginalised groups. To correct this, the Recommendation on the Ethics of Artificial Intelligence was adopted by acclamation by 193

Member States in 2021. Global AI Ethics and Governance Observatory.

The aim of the Observatory is to provide a global resource for policymakers, regulators, academics, the private sector and civil society to find solutions to the most pressing challenges posed by Artificial Intelligence.

Advantages of Artificial Intelligence in Improving Academic Support Teaching, Learning and Research Areas

Text and Data Mining

The ability of AI to mine data and write language is revolutionizing research support. Libraries can use AI technologies to analyze large datasets more quickly and thoroughly. Accelerated trend analysis, data extraction, and literature reviews help researchers and greatly improve the productivity of the research process.

AI-assisted Information Literacy Programs

Libraries may use AI to create interactive and adaptable information literacy programs since they are centres of learning. These customized learning-style-based programs offer users one-on-one assistance in navigating the information landscape. AI-powered lessons help users develop their critical thinking abilities so they

may successfully traverse the complexity of information in the digital era.

Conclusion

Use of AI systems and tools must be safe and effective for students. They must include algorithmic discrimination protections, protect data privacy, provide notice and explanation, and provide a recourse to humans when problems arise. The people most affected by the use of AI in education must be part of the development of the AI model, system, or tool, even if this slows the pace of adoption.

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Call for Social Justice

Droupadi Murmu, Hon'ble President of India delivered the Convocation Address at the 21st Convocation Ceremony at Nalsar University of Law Hyderabad on September 28, 2024. She said, "It is your duty to give your advice in line with high ethical standards. Whatever role you choose as a legal professional, always stick to the values of integrity and courage. Speaking truth to power makes you more powerful." Excerpts

I convey my hearty congratulations to all the students who have been awarded their degrees in this convocation. I share the joy of those students who have received medals for their extraordinary accomplishments. I appreciate the contribution of the faculty-members and the entire team of the University in helping the students reach a major milestone in their life and career. I understand the sense of fulfilment among the family-members who have been helping and encouraging the students.

I admire the efforts of NALSAR in taking care of issues concerning disability, access to justice, prison and juvenile justice, and legal aid. I am happy to note that NALSAR has set up an Animal Law Centre. It reminds me of my tenure as the Minister for Department of Fisheries and Animal Resources Development in Odisha nearly 20 years ago. There, I had realised that there must be wide-spread efforts to sensitise people about protection and welfare of animals. I expect the younger generations to protect animals and birds, trees and water-bodies as necessities for wellbeing of the humanity. NALSAR's Animal Law Centre is a good step in that direction.

I am glad that this University is also focusing on Artificial Intelligence as an area of study. In the global legal scenario, jurists and judges are seized with the matter of consulting with algorithms for evaluating parties in a dispute. As future legal professionals, the students passing out today should be prepared to deal with rapid changes induced by technology.

They should use technology as a tool for professional advancement and also as a means of social justice.

Dear students, For a great country like ours, a sense of history arouses national pride and aspirations. Democratic traditions and practices of ancient India were highlighted by Dr. B.R. Ambedkar in his concluding speech at the Constituent Assembly.

The system for administration of justice reflects the prevailing social and cultural environment of a society. Nearly 2300 years ago, the ambassador from Macedonia in the court of Chandragupta Maurya, Megasthenes described Indians as remarkably law-abiding people. Chandragupta Maurya's minister Chanakya, in his celebrated work 'Artha-Shastra', had advised that a bench of three magistrates be set up for every ten villages, with higher courts in districts and provinces. A bench of judges was preferred to individual judges. Artha-Shastra enumerates the high standards set for the officers responsible for administration of justice. It also suggests that no private meetings should be allowed between judges and litigants until cases were settled. Impartial administration of justice was given utmost importance.

A rich corpus of legal literature was developed in different parts of ancient India. One of the most important legal references, the Apastamba Sutra is said to have been written in this very Deccan region.

Dear students, I have shared these historical details with you to remind you of the high legal traditions of our country. Our proven excellence in the past will inspire you to re-discover our collective genius.

Father of the nation, Mahatma Gandhi gave up a successful legal career to fight for justice on a much larger scale. Yet, his articulation like a lawyer was evident in his advocacy for the great causes he took up. His first Satyagraha in India, at Champaran, was launched for securing justice for the poor farmers exploited by Indigo planters. As part of the satyagraha, Gandhiji and his associates like Dr Rajendra Prasad, who was also a lawyer, prepared detailed documents concerning each and every farmer. This systematic and voluminous documentation, prepared over several days, strengthened the Satyagraha, forcing the government to decide in favour of the farmers.

Thus, Gandhiji blended compassion with legal acumen and won several battles against the most powerful empire the world has ever seen. This blend of compassion and legal expertise is a formula for success which also contains sensitivity and fairness. This can be a template for a legal professional who wants to have a meaningful and successful career and life.

Our Constitution contains the ideals of our freedom struggle, namely, justice, liberty, equality and fraternity. The ideal of equality, enshrined in the Preamble and Fundamental Rights, also finds expression in one of the Directive Principles of State Policy concerning delivery of justice. The Directive seeks to provide equal justice and free legal aid. It makes the State responsible "...to ensure that opportunities for securing justice are not denied to any citizen by reason of economic or other disabilities." The vision statement of your institution also underlines a particular focus on social justice to the marginalised communities. Unfortunately, a poor person does not get the same access to justice as a rich person. This unfair situation must change for the better. I expect your generation of legal professionals to be the change agents.

Dear students, Advocates are officers of the courts. As advocates, you will have a duty to assist the court in dispensing justice, apart from taking care of the interests of your clients. Many of you may be joining corporate entities or legal firms as advisers or associates. It is your duty to give your advice in line with high ethical standards. Whatever role you choose as a legal professional, always stick to the

values of integrity and courage. Speaking truth to power makes you more powerful.

I have observed that girl students have outnumbered boys as medal- winners. Although, the total number of girl students who received degrees today is a little less than that of the boys. I have seen this pattern across many institutions of higher education. This demonstrates that despite several limitations which they still have to face, our daughters are making us proud with their excellence. I convey my special appreciation for the girl students in today's convocation. I also expect these girls to help and empower other women and girls who are under-privileged.

NALSAR has taken lead in several areas. In today's convocation, members of Bar and Bench are gathered here. Every segment of the society is a stakeholder in promoting safety of women. I urge upon NALSAR, including its alumni, to enlist the support of all stakeholders and help in setting up a nationwide network of women advocates and law students. This network will work with the mandate to make concerted efforts to prevent atrocities against women and deal with cases of such atrocities.

Dear students, I am sure you will utilise your education in NALSAR as an effective instrument of social justice and development. With this approach, you will add meaning to your success. You will also have the satisfaction of making contribution to our national goals. I wish you a very bright future.

Thank you, Jai Hind! Jai Bharat! □

Invitation to Authors

Authors are invited to contribute articles on contemporary issues in higher education in general and Indian higher education in particular for publication in the 'University News'. The articles addressing the Editor University News be sent as an e-mail attachment in MS WORD to: unaiu89@gmail.com; ramapani.universitynews@gmail.com; universitynews@aiu.ac.in.

Opinions expressed in the articles published in the University News are those of the contributors and do not necessarily reflect the views and policies of the Association.

Capacity Building Programme on Research

A twelve-day Capacity Building Programme on 'Research in Practice (Interdisciplinary)' was organised by the Programme and Extension Cell, Department of Education, Central University of Jharkhand, Ranchi through online mode, recently. The main objective of the programme was to enhance the skills, competencies, and expertise of the faculty members, research scholars, and other stakeholders of colleges, universities, and other Higher Education Institutions of the country on the practical aspect of research, especially from interdisciplinary perspectives. Around 175 participants from universities and colleges across 23 Indian states participated in the programme. A total of 31 resource persons contributed to the programme by enlightening and enriching the participants on the latest perspectives of research in practice in the programme. Various stalwarts of the education fraternity were the resource persons of the programme who explained different concepts of research in practice.

Padma Shri Prof. Aditya Prasad Dash, Former Vice Chancellor, Central University of Tamil Nadu was the Chief Guest of the Inaugural Session of the programme. Prof. Dash, in the inaugural address, expounded on the paramount importance of practical research from an interdisciplinary perspective and how it can revolutionise the world of research and academics. He said that despite the growth of universities and colleges in India, the research scenario is still not encouraged enough and there is also a lack of patent culture in the country. Among 45,444 patents filed in 2016-17, 71% were filed by foreigners. Prof. Dash shared his concerns about the existing gap between theory and practice in research. He stressed the need for teamwork and effective communication in research. He said that all subjects aren't equal, but interdisciplinary and trans-disciplinary research should be encouraged to bridge them together. According to him, every Ph.D. student should write at least one popular article. He also shed light on achieving the 17 goals of SDG by 2030 by establishing an efficient relationship among its five pillars: people, prosperity, peace, partnership, and the planet. He concluded his speech by addressing the sad reality of true geniuses and

talents like Vasistha Narayan Singh in our country, highlighting the problem of brain rusting.

The Presidential Address was delivered by the Vice Chancellor, Prof. Kshiti Bhusan Das, Central University of Jharkhand, Ranchi, who urged the participants to imbibe the knowledge to be shared in the programme and apply the same in their profession for the greater development of the self and society. He shared his belief on how practice makes a man professional and drew attention to UGC's proposed scheme 'Professors of Practice', in which scholars with 15 years of experience do not need a Ph.D. to be appointed as professors. He elaborated on how embedding a research-based approach in the teaching-learning process enhances the abilities and skills of the concerned professionals. Prof. Das focused on the benefits of continuous professional development as proposed in NEP-2020. He advised educators to collaborate with the students as well as colleagues to promote research, which has taken a backseat in today's education system. He reiterated the promotion of '*Bharatiya Gyan Parampara*' for the progress of the nation.

The main focus areas of discussion in the programme were, Formulation of Research Titles in Various Types of Researches, Operationalising Variables and/or Constructs and Hypothesis Formulation, Sampling Process in Research, Research in Practice—A Tool for assessing Academic Performance (UGC Regulations 2018, 2010, 1998 and Others), Developing Research Proposal: The Key Considerations, Publishing Research Outcomes in High Impact Journals, Determining Methodology of Research in Research Process, Referencing Styles (APA, MLA, Chicago, Harvard and others), Book/ Document Review: Objective, Style and Approaches, Review of Research to Improve Quality of Research, Plagiarism in Research (Interpretating Plagiarism Reports), Data Analysis in Research: Process and Techniques, Preparation of a Research Paper for Publication in Journal, Use of Statistical Methods for Analysis of Data, Research Tool Development Considerations and Practical Instances, Open Access Materials / Creative Common Licensed Materials for Research, etc.

The Valedictory Session of the programme was graced by the Chief Guest, Prof. A K Pandey, Vice Chancellor, Vikram University, Ujjain, Madhya Pradesh. He inspired the participants by suggesting that research requires patience and is a time-consuming affair, therefore, cooperation or collaboration is important in the process of conducting research. The active involvement and cooperation of Prof. Kshiti Bhusan Das, Vice Chancellor, Central University of Jharkhand, Ranchi led the programme towards its success in the self-sustaining mode. Prof. Tapan Kumar Basantia, Department of Education, Central University of Jharkhand, was the Coordinator of the event and Dr. M Ramakrishna Reddy, Assistant Professor, Department of Education, Central University of Jharkhand, was the Co-coordinators. The programme acted as a platform to acquaint the faculty members of Higher Education Institutions across the country with the contexts, processes, outcomes, issues/problems, challenges, and prospects of research in practice from interdisciplinary perspectives.

Research Conclave on Setting Trends for Shaping the Future of Research

A two-day Annual Research Conclave on ‘Setting Trends for Shaping the Future of Research’ is being jointly organized by the Research and Development Cell (RDC), Centre for Indigenous Innovation and Entrepreneurship (CIIE) and Internal Quality Assurance Cell (IQAC), Kalinga Institute of Social Sciences (KISS), (Deemed-to-be University), Bhubaneswar, Odisha, from July 17-18, 2025. The event aims to provide a platform for research scholars to present, discuss and exchange innovative ideas across various disciplines. It will serve as a hub for intellectual discourse, networking and collaboration, fostering an interdisciplinary research culture. It will feature a research conclave and poster presentations, highlighting the diverse research contributions of scholars in their respective domains.

- Indigenous Knowledge and Sustainable Development.
- Social Sciences and Tribal Development.
- Education, Policy, and Governance.
- Science, Technology and Innovation for Indigenous Communities.
- Interdisciplinary Approaches to Innovation.
- Sustainability and Environmental Impact.

- Sustainable E-Commerce: Innovating for a Greener Future.

For further details, contact the Convener, Kalinga Institute of Social Sciences (KISS), (Deemed-to-be University), Bhubaneswar, Odisha-751024, Phone No: 09776246270, and 07488615047, E-mail: rnc2020@kiss.ac.in. For updates, log on to: <https://university.kiss.ac.in> and www.kiss.ac.in

Certificate Course on Applied Data Analytics

A thirteen-day Course on ‘Applied Data Analytics: A Practical Approach’ is being organised by the Department of Information Technology, NIT Raipur, Chhattisgarh from May 26-June 09, 2025. The main objective of the course is to help the participants in developing a solid understanding of the Data Science and Analytics techniques like data pre-processing, predictive analysis, fundamentals of data statistics, machine learning techniques and data visualisation, etc., with the help of emerging data analytics tools like Python/R. The mathematical foundation for analyzing the data will add more knowledge about the data, and this will help for decision support systems. This certificate course will help to enhance the knowledge of the participants in the field Data Science and Analytics. The Course Contents are:

Module I

Introduction to Data Science and Analytics, Engineering Applications of Data Science and Analytics, Machine Learning Pipeline.

Introduction to Python Programming:

Installation of Anaconda, Python Basic: Data types, operators, String operations, Input Function, Print Formatting, comments, Python Program Flow: Indentation, If statement and its related statement, while loop, for loop, range statement, break and continue, Assert, Example of looping Python Functions: defining a function, calling a function, Passing Arguments by Reference Values, Lambda functions and map; List, Multidimensional Lists, File, Exception handling Tuples, Sets, and Dictionaries in Python

Module II

Data Preprocessing: Types of features, Encoding Categorical Variable. Statistical features, Structured features, Feature transformations, Thresholding and discretization, Data manipulation, standardization

and normalization, Data Normalization: Min-Max, Z-score, Decimal Scaling

Module III: Feature Engineering

Introduction to Feature Selection: Filter methods: Pearson correlation, Chi-Square, Information Gain Case-study using Python and filter-based feature selection techniques.

Wrapper Method for Feature Selection: Forward selection, Backward elimination, Stepwise selection, Case-Study using Python and wrapper-based feature selection techniques.

Predictive Modelling: Linear Regression, Multiple Regression analysis, Case-Study using Python and Linear regression technique.

Module IV: Supervised and Unsupervised Learning

Types of Machine Learning: Supervised and Unsupervised Learning,

Supervised Learning Algorithms: K-NN, Logistic regression, Case-Study using Python and K-NN, Random Forest, Case-Study using Python and RF, Decision Tree, Case-Study using Python and DT, SVM, Case-Study using Python and SVM, Ensemble Learning Model: Voting-based techniques, Case-Study using Python and Voting-based technique.

Module V: Performance Metrics & Data Visualization

ML Model Performance Metrics: Confusion Matrix, Accuracy, Precision, Recall, F1-Score, Positive Rate, False Positive Rate, Case Study using Python for all metrics; Data Visualization: using Matplotlib python library.

For further details, contact the Course Coordinators, Dr. Govind Gupta /Dr. Mridu Sahu, Assistant Professor, Department of Information Technology, NIT Raipur-492010, Chhattisgarh, Mobile No: 09891952480 / 09826501139, E-mail: gpgupta.it@nitrr.ac.in and/or mrisahu.it@nitrr.ac.in. For updates, log on to: www.nitrr.ac.in/event

International Conference on Data Sciences and Applications

A three-day International Conference on 'Data Sciences and Applications' is being jointly organised by the Malaviya National Institute of Technology Jaipur and Soft Computing Research Society from

July 16-18, 2025 through hybrid mode. It aims to bring together leading academicians, scientists, researchers, scholars, UG/PG graduates from all over the world to exchange and share their research advancements. It aims to provide a state-of-the-art platform to discuss various aspects of Models and Algorithms, Signal and Image Processing, Data Science, Data Analytics in Communication and Data Science applications. The topics of the event are:

Data Science

Pattern recognition, Non-linear Statistical Models, Data handling and Visualization, Time series forecasting, Optimization Techniques, Data Mining Techniques, Big Data applications, Computer Vision, Natural Language Processing, Human and Social Behaviour Analysis, Robotics and Embedded Systems, Applied mathematics and informatics, Predictive analytics and Segmentation, Data compression, Data clustering, Classification, Block chain Technology.

Models and Algorithms

Data Fusion Models, Cognitive computing, Probabilistic Reasoning, Supervised and Unsupervised Learning, Reinforcement Learning, Neural Networks, Self-Organizing Maps, Support Vector Machine, Machine Learning techniques, Deep Neural Networks, Fuzzy Logic based computing, Nature Inspired Optimization, Evolutionary Computation, Swarm Intelligence, Genetic Algorithms, Ant Colony Optimization, Multi and Many-objective Optimization.

Signal and Image Processing

Digital Signal Processing, Adaptive Signal Processing, Multi-rate signal Processing, Audio and speech signal Processing, Wavelet transform, S Transform, Image Processing techniques, Image segmentation, Detection and Estimation algorithms, Remote Sensing Image Analysis, Biomedical Signal and Image analysis, Radar and Sonar Signal Processing, Seismic Signal processing, VLSI architectures for Signal Processing, Natural language processing.

Data Analytics in 4G, 5G and 6G Communication

Data handling in Digital Communication, Data acquisition and processing in Wireless and Mobile Communication, Data in Optical Communication, Data in Satellite Communication, Data in Underwater Communication, Data in Software Defined Radio and

Cognitive Radio, Data in 4G and 5G Architectures and applications, 6G and beyond data, Data analysis in Antenna and Wave Propagation, Data in Wireless Sensor Networks.

Data Science Applications

Data Granularity, Large Scale Optimization, Digital marketing and analysis, Bioinformatics, Power system analysis, Intelligent System Design, Expert Systems, Internet of vehicles, Electric Vehicles, Robotics and automation, Internet of everything,

Data curation, Data privacy, Data Security, Industrial applications, Industry 4.0, Computational Finance, Agriculture and environment, Seismicity Analysis, and other applications.

For further details, contact the Organising Secretary, Malaviya National Institute of Technology, Jaipur, Rajasthan-302017, E-mail: icdsa@scrs.in | icdsa.scrs@gmail.com. | sjnanda.ece@mnit.ac.in. For updates, log on to: <https://scrs.in/conference/icdsa2025>

AIU News

AI Certificate Course by AIU—EdifyOnline

The Association of Indian Universities (AIU), New Delhi, announced the launch of a new Online Certificate Course in ‘Artificial Intelligence’ (AI) in collaboration with EdifyOnline Corp (USA), under the ongoing University Cluster Pilot Study (UCPS) initiative. The course ‘AI Prompt Engineering’, is being offered in partnership with Chegg Skills, a renowned US-based education technology company. This offering is strategically designed to meet the evolving demands of the higher education sector and address the growing relevance of AI applications across disciplines. Aligned with the National Education Policy (NEP)- 2020 and UGC guidelines, the course aims to equip learners with essential AI competencies, thereby contributing to their global readiness and professional development.

Learners (students) may enrol in the offered course by registering through the provided links. The course is available at a subsidized fee of \$120 USD per student, to be paid directly to EdifyOnline. Upon successful completion, participants will be awarded

an IHE Certificate. Learners are encouraged to collaborate with their respective institutions to seek academic credit for the IHE Certificate, in alignment with Sections 10.10 and 11.7 of the NEP-2020.

Key Learning Outcomes

- Automate and Prioritise Tasks.
- Enhance Written Communication.
- Develop Prompts for GPT-4, ChatGPT and LLMs.
- Integrate AI into Your Work
- Capstone Project.
- Weekly Expert-led Live Sessions.
- 30-hour Equivalent Course.

Institutions interested in sponsoring learners may contact Mr. Vik Agarwal at E-mail: vik@edifyonline.com for further arrangements. Interested learners can register for the course on or before May 19, 2025, by visiting the official platform at <https://learn.edifyonline.com>. For any queries or support, please send an E-mail to: vik@edifyonline.com. □

ATTENTION UNIVERSITIES !

The University News has a Special Column for Publication of Convocation Addresses and other Special Addresses. The Universities are encouraged to send their Convocation Addresses to the Editor University News regularly for Publication.

THESES OF THE MONTH

HUMANITIES

A List of doctoral theses accepted by Indian Universities
(Notifications received in AIU during the month of March-April, 2025)

Geography

1. Reang, Deepanjali. **Sustainability of eco-tourism: An assessment of selected tourism sites in Tripura.** (Prof. P K Rynngnga), Department of Geography, North Eastern Hill University, Shillong.
2. Rai, Deepa. **Impact of tourism on environment and local community in Sikkim.** (Prof. Y V Krishnaiah), Department of Geography & Disaster Management, Tripura University, Suryamaninagar.

History

1. Atma Ram. **A factual study of the historical and cultural contributions of Sri Ganganagar Hanumangarh Region in Indian history.** (Dr. Seema Verma), Faculty of Arts, Crafts & Social Sciences, Tantia University, Sri Ganganagar.
2. Jyrwa, Elimonhunlang Mary. **Gender relations in the Khasi-Jaintia Society: Pre-colonial to colonial period.** (Prof. A Passah), Department of History, North Eastern Hill University, Shillong.
3. Kabinai, Kamei. **Indigenous games of the Rongmei Naga: Pre colonial to contemporary times.** (Prof. S N Lamare), Department of History, North Eastern Hill University, Shillong.
4. Lucy, Langriangliu. **Rongmei Naga Society from pre-colonial to colonial period.** (Prof. M S N Rahman), Department of History, North Eastern Hill University, Shillong.
5. Nongtdu, R Merika. **Coal mining in Jaintia Hills: A historical study.** (Prof. V R Rengsi and Prof. S N Lamare), Department of History, North Eastern Hill University, Shillong.
6. Sarkar, Rima. **Social history of Western Assam (13th to 18th Century).** (Prof. M S N Rahman), Department of History, North Eastern Hill University, Shillong.

Languages & Literature

English

1. Asmi. **Narrating the nation: A study of the selected novels by selected journalists of India.** (Prof. Anu Shukla), Department of Department of English and Foreign Languages, Chaudhary Devi Lal University, Sirsa.

2. Bano, Afsana. **Portrayal of women as Rebel: A study of the works of Rama Mehta.** (Dr. Nidhi Bhatnagar), Department of English, Sangam University, Bhilwara.
3. Buddhadev, Pooja Kiranbhai. **A translation of K M Munshi's select literary essays from Gujarati into English with a critical introduction.** (Dr. Iros Vaja), Department of English, Saurashtra University, Rajkot.
4. Kiran Kumar. **Representation of World War II in the selected works of Kazuo Ishiguro and Michael Ondaatje.** (Dr. Jyoti Syal), Department of English, Maharishi Markandeshwar University, Ambala.
5. Langngap, Badakynti Nylla. **Representation of self: A select study of literacy texts by Khasi writers and transcribers.** (Prof. E Syiem and Prof. M M Mazumdar), Department of English, North Eastern Hill University, Shillong.
6. Shefin, S. **Exploring intercultural performances through Kathakali: Adaptation of Shakespearean plays and Cervantes Don Quixote.** (Prof. B I Guru), Department of English and Other European Languages Languages, Dr Harisingh Gour Vishwavidyalaya, Sagar.
7. Vyas, Bhavisha Yogesh. **Devising a model for teaching international intelligibility to the UG students of ESL in Gujarat.** (Dr. Jaydipsinh Dodiya), Department of English, Saurashtra University, Rajkot.

Hindi

1. Apum, Aseng. **Arunachal Pradesh ke Wancho Janjati ke lok sahitye ka samajik avam sanskritik adhyayan.** (Dr. Arun Kumar Pandey), Department of Hindi, Rajiv Gandhi University, Itanagar.
2. Jangir, Sweta. **Hindi sahitye ke itihās ka darshan aur mulye.** (Dr. Avadhesh Kumar), Department of Hindi, Sangam University, Bhilwara.

Odia

1. Kunar, Kirtan. **Shree Jagannath Mandira O adibashi Sanskruti: Eka anushilana.** (Dr. Amulya Ratna Nanda), Kalinga Institute of Social Sciences, Kalinga Institute of Industrial Technology, Bhubaneswar.

Sanskrit

1. Arun. **HimachalPradeshiysanchajyotishsy Samikshatmakmadhyaynam.** (Prof. Diwakar Dutt Sharma), Department of Phalit Jyotisha, Shri Lal Bahadur Shastri National Sanskrit University, New Delhi.
2. Bhat, Ganesh. **A critical edition and study of a commentary by Visvantha Bhatta on Keśavīyajātakapaddhatih.** (Prof. A.P.Sachidananda), Department of Jyotish, Central Sanskrit University, New Delhi.
3. Bhattacharjee, Manidipa. **The influence of Vedanta philosophy on Mahakavi Kalidas.** (Dr. Swarga Kumar Mishra), Department of Sahitya, Central Sanskrit University, New Delhi.
4. Chandrani, Bindu. **Vartmankalik Bhartiye istrivishayak sampati ka adhikar Smritikalik Istrivishayek Dayevibhag: Ek samikshnatamak adhyayan.** (Dr. Samani Sangeet Prajna), Department of Prakrit and Sanskrit, Jain Vishva Bharati Institute, Ladnun, District Nagaur.
5. Chatterjee, Vaskar. **A critical study on the plays written in the post independent Bengal deciding various political turmoil.** (Dr. Mohini Arora), Department of Sahitya, Central Sanskrit University, New Delhi.
6. Chuni Lal. **Jyotishashāstrīyavrukshāyurve davimarshah paryāvaranashikshadrishtya tatsamikshananycha.** (Prof. Laxmi Niwas Pandey), Department of Jyotish, Central Sanskrit University, New Delhi.
7. Das, Madhumita. **A graphic representation of Bouddhatarkabhasa.** (Prof. Harekrushana Mohapatra), Department of Sarvadarshan, Central Sanskrit University, New Delhi.
8. Joshi, Shikha. **Cultural studies of Ganesh Purana and its contribution.** (Dr. Mamta Gupta), Faculty of Arts, Crafts & Social Sciences, Tanta University, Sri Ganganagar.
9. Kamalpragya. **Mul aagam granthoan mein pratipadit jeevan vigyan: Ek drishti.** (Dr. Samani Sangeet Prajna), Department of Prakrit and Sanskrit, Jain Vishva Bharati Institute, Ladnun, District Nagaur.
10. Khiriya, Aditya. **Acharya Mahapragya ke Sanskrit sahitye mein alankar: Ek samikshnatamak adhyayan.** (Prof. Damodar Shastri), Department of Prakrit and Sanskrit, Jain Vishva Bharati Institute, Ladnun, District Nagaur.
11. Mahendra Singh. **Rajasthani sahitye mein navvichar: Jayacharya ke vishesh sandarbh mein.** (Dr. Satyanarain Bhardwaj), Department of Prakrit and Sanskrit, Jain Vishva Bharati Institute, Ladnun, District Nagaur.
12. Mandal, Anup. **Swami Vivekanandakritishu Shankarvedantasya prabhavah.** (Prof. K. Anantha), Department of Advaita Vadanta, Shri Lal Bahadur Shastri National Sanskrit University, New Delhi.
13. Mishra, Sarmistha. **ŚrīKāśmīrikasādānanda yativiracitasya svarūpaprakāśagranthasya samiksātmakamadhyayanam.** (Prof. Gourpriya Dash), Department of Advait Vedant, Central Sanskrit University, New Delhi.
14. Murali Krishna, V. **An analytical study on Horakrishneeya from the view of Prashnasatra.** (Prof. A P Sachidananda), Department of Jyotish, Central Sanskrit University, New Delhi.
15. Nagakaumudi, R. **A comparative study until the end of Avyaya Prakarana of Siddhantakalumudis commentaries of Saradrātri-Balamanorama.** (Prof. C H Krishanant Padmanabham), Department of Vyakarna, Central Sanskrit University, New Delhi.
16. Panigrahi, Debasis. **A comparative study between two Gangalaharikavyas.** (Prof. Sushant Kumar Raj), Department of Sahitya, Central Sanskrit University, New Delhi.
17. Poonam Kumari. **Ekavinshatishataabdyam shatakakaavyaparamparaayaa vikaasah.** (Prof. Bhagirathi Nanda), Department of Sahityam, Shri Lal Bahadur Shastri National Sanskrit University, New Delhi.
18. Rout, Charulata. **A critical study of Dattatreya Yogashastra.** (Dr. Ashok Kumar Meena), Department of Sankhya Yoga, Central Sanskrit University, New Delhi.
19. Saini, Sonali. **Yajurvede ausadhinam t a t p r a y o g a p r a k a r a n a m c h a d h y a y a n m .** (Prof. Devendra Prasad Mishra), Department of Shuklayajurveda, Shri Lal Bahadur Shastri National Sanskrit University, New Delhi.
20. Sakaliya, Prakashbhai Lakhbhai. **Sri Rukmini Parinaya mahakavya of Sri Visvanathdev Varma: A study.** (Dr. M K Moliya), Department of Sahitya, Saurashtra University, Rajkot.
21. Sarangi, Jubuli. **Srimadbhagavatiyastutinām dārśanikam vislesanam.** (Prof. Gaurpriya Dash), Department of Advait Vedant, Central Sanskrit University, New Delhi.
22. Sharma, Hemant Krishna. **Parama Laghu Manjusha Granth mein pratipadit vyakaran darshan: Ek samikshnatamak adhyayan.** (Prof. Damodar Shastree), Department of Prakrit and Sanskrit, Jain Vishva Bharati Institute, Ladnun, District Nagaur.
23. Shukla, Ajay Kumar. **Haridasasiddhantavagisaviracitamivar apratapanatakasya Natyasastriyam adhyayanam.** (Dr. Anmol Sharma), Department of Sahityam, Shri Lal Bahadur Shastri National Sanskrit University, New Delhi.

24. Sonali. **Vastupadavinayasavimarsah.** (Prof. Ashok Thapliyal), Department of Vastushastra, Shri Lal Bahadur Shastri National Sanskrit University, New Delhi.
25. Subedi, Janardan. **A critical analysis of the Maxims found in Vyāpti, Paksatā and Avayava chapters in the commentarial tradition of the Tattvacintāmani.** (Prof. K E Madhusudana), Department of Nyaya, Central Sanskrit University, New Delhi.
26. Swami, Meenu. **Atharvaveda mein nirupit rog evam mantre, mani va aushdhi dwara rogopachar.** (Dr. Samani Sangeet Prajna), Department of Prakrit and Sanskrit, Jain Vishva Bharati Institute, Ladnun, District Nagaur.
27. Tripathi, Ratnesh Kumar. **Sāankhyabuddhadarshanayoah tulanātmakamadyayanam.** (Prof. Vijay Kumar Jain), Department of Darshana, Central Sanskrit University, New Delhi.
28. Yadav, Radha Krishna. **Patanjala-Bauddha-Jainadarsanabhimatayogatattvanam tulanatmakamadyayanam.** (Prof. Shiv Shankar Mishra), Department of Sankhya Yoga, Shri Lal Bahadur Shastri National Sanskrit University, New Delhi.
2. Dixitratna Shri. **Acharya Shri Haribhadra Suri krit Sam Raich Kaha ka darshnik mulyankan.** (Prof. Samani Riju Prajna), Department of Jainology and Comparative Religion & Philosophy, Jain Vishva Bharati Institute, Ladnun, District Nagaur.
3. Jain, Achyut Kant. **A philosophical application of causality: With special reference to Jaina philosophy.** (Prof. Anand Prakash Tripathi), Department of Jainology and Comparative Religion & Philosophy, Jain Vishva Bharati Institute, Ladnun, District Nagaur.
4. Jain, Megha. **Applied Jainism in holistic health: Qualitative research among medical practitioners.** (Prof. Samani Chaitanya Prajna), Department of Jainology and Comparative Religion & Philosophy, Jain Vishva Bharati Institute, Ladnun, District Nagaur.
5. Jain, Trilok Chand. **Jain jeevan padhati kee vartman Yug mein prasangikta.** (Prof. Samani Riju Prajna), Department of Jainology and Comparative Religion & Philosophy, Jain Vishva Bharati Institute, Ladnun, District Nagaur.
6. Pratap. **Review of social utility of philosophical elements of Acharya Kundkunda's Pravachansara Granth.** (Prof. Yogesh Kumar Jain), Department of Jaindarshan, Central Sanskrit University, New Delhi. □

Linguistics

1. Marthong, Venial In Goodhope. **Nominal construction in Mawiang and Lyngngam varieties of Khasi: A comparative study.** (Dr. B Khyriem), Department of Linguistics, North Eastern Hill University, Shillong.
2. Rajee, Clarissa Jane. **Communicative repertoire of Indian English in digital communication: A citizen sociolinguistic approach.** (Prof. S K Singh), Department of Linguistics, North Eastern Hill University, Shillong.

Philosophy

1. Bhagabati, Mitali. **Counseling multiculturalism: An Advaita Vedanta approach.** (Dr. A U Sharma), Department of Philosophy, North Eastern Hill University, Shillong.

Religion

Jainism

1. Dharmratnashree. **Bhartiye sanskriti mein aahar sahita ka sarvageen adhyayan: Jain vichardhara ke vishesh sandarbh mein.** (Dr. Samni Amal Prajna), Department of Jainology and Comparative Religion & Philosophy, Jain Vishva Bharati Institute, Ladnun, District Nagaur.



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Sr. No.	Post	No. Post	Full Time	Reservation
01	Principal	One	Full Time	Unreserved

Permission as per NOC No. JDHE Nanded/NOC/2025/48 Dt. 29/04/2025

a) Educational Qualification:

- 1) A Master's Degree with at least 55% marks (or an equivalent grade in a point scale whenever grading system is followed) by recognized university.
- 2) A Ph.D. Degree in concerned/allied/ relevant discipline (s) in the institution concerned with evidence of published work and research guidance.
- 3) Professor/Associate Professor with a total experience of fifteen years of teaching/research in Universities, Colleges and other institutions of Higher Education.
- 4) A minimum of 10 research publication in peer reviewed or UGC listed Journals.
- 5) A minimum 110 research score as per Appendix II, Table 2 of UGC Regulations 2018.
- 6) Academic Eligibility and other Rules Regulations as per UGC Regulation 18 July, 2018 and Govt. Resolution No. Misc-2018/C.R.56/UNI-1 Date 08 March, 2019.

- b) **Tenure:** A College Principal shall be appointed for the period of five years. Extendable for another term of five years on the basis of performance based assessment. A committee appointed by the University. Constituted as per rules of UGC and Govt. of Maharashtra.

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1. Prescribed application form is available on the University **website (www.srtmun.ac.in)**
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Correspondence Address : Vichar Vikas Mandal's Mahatma Gandhi Mahavidyalaya, Ahmedpur Dist. Latur – 413515 (Maharashtra) College website: www.mgmahmedpur.org

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		Contract basis	Lecture basis
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1.	Assistant Professor in Pharmaceutical Chemistry	02	---
2.	Assistant Professor in Quality Assurance	01	---
3.	Assistant Professor in Organic Chemistry	03	---
4.	Assistant Professor in Physical Chemistry	01	01
5.	Assistant Professor in Inorganic Chemistry	01	---
C.	B.B.A.		
1.	Assistant Professor in Human Resource Management	01	---
2.	Assistant Professor in Finance	01	---
3.	Assistant Professor in Psychology	01	---
D.	B.C.A.		
1.	Assistant Professor in Computer Applications	05	01
2.	Assistant Professor in English	---	01
3.	Assistant Professor in Commerce	---	01
4.	Assistant Professor in Mathematics	---	01
5.	Assistant Professor in Economics	---	01
6.	Assistant Professor in Environmental Studies	---	01
7.	Assistant Professor in Hindi	---	01

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Date: 12/05/2025

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Shri. Kiran H. Shirodkar
CHAIRMAN



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20th-21st June 2025

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Hindi is the basis of Indian identity
- वैश्विक सन्दर्भों में हिंदी का उदय
Rise of Hindi in global context
- राष्ट्रीय चेतना और हिंदी भाषा
National consciousness and Hindi language
- स्वतंत्रता आंदोलन एवं हिंदी साहित्य
Freedom movement and Hindi literature
- नए ज्ञानानुशासनों में प्रवेश करती हिंदी... कानून प्रबंधन, शांति वार्ता, हाशिए के विमर्श, इत्यादि
Hindi entering new disciplines... law management, peace talks, discussions on the margins, etc.
- भारतीय ज्ञान परंपरा के पुनरुत्थान में हिंदी की भूमिका
Role of Hindi in the revival of Indian knowledge tradition
- भारत बोध एवं हिंदी
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- आदिवासी समाज और हिंदी साहित्य
Tribal society and Hindi literature
- विश्व के विभिन्न देशों में हिंदी
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For registration or queries, please contact:

Ms. Ranjana Parihar

Joint Secretary

Association of Indian Universities (AIU)

AIU House, 16 Comrade Indrajit Gupta Marg,

New Delhi – 110002

✉ Email: aadc@aiu.ac.in

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Last Date for Registration:

30th May 2025