ASSOCIATION OF INDIAN UNIVERSITIES

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).

These centers will focus on:
▶ Training faculty for online/blended teaching-learning methodologies.
▶ 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).

✓ AADC will offer short-term capacity-building programmes for faculty, administrators, and other stakeholders in online, offline or hybrid modes.

✓ 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.

✓ AIU will extend a one-time financial support of ₹1,00,000 per selected university:
  a) An advance of ₹50,000 will be released at the time of the launch for the first programme.
  b) The remaining ₹50,000 upon submission of a Utilization Certificate

✓ Each AADC Centre is expected to conduct a minimum of five (05) programmes during one academic calendar year, **with at least one programme held in physical mode.**

✓ AIU will provide academic guidance, including:
  (a) Identifying resource persons
  (b) Assisting in the design and development of course content.
  (c) Supporting the academic structure and delivery model
  (d) Programme themes and logistics will be finalized in collaboration with the host university

✓ After completion of each programme, the host university is required to submit a comprehensive report to AIU for:
  (a) Archiving   **(b)** Possible publication in the University News   **(c)** Uploading on the AIU website

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.

The Human Future of Education: Nurturing the Affective Domain in an AI-driven World Building

Neeraj Saxena*

In an era increasingly shaped by technological advancement and digital disruption, the affective domain of learning — encompassing values, empathy, ethical reasoning, and emotional intelligence — has emerged as a critical frontier in higher education. This article argues that nurturing the affective domain is no longer optional but essential for shaping socially responsible, emotionally resilient, and ethically conscious graduates. It explores the integration of the affective domain across curricula, highlights the need for reimagined teacher training focused on affective facilitation and assessment, and proposes innovative approaches to evaluating affective outcomes. Furthermore, it emphasizes the strategic use of AI and digital platforms to support affective learning without compromising human connection. Anchored in India's vision of *Viksit Bharat@2047*, the article asserts that higher education institutions must move beyond producing employable graduates to cultivating ethical citizens capable of leading with compassion, integrity, and social responsibility. Ultimately, it positions the affective domain as the human future of education — vital for realizing India's aspiration to become a developed and humane society by 2047.

The Missing Piece in Higher Education: Why the Affective Domain Can't Be Ignored

In the rapidly evolving landscape of higher education, dominant discourses often orbit around employability enhancement, digital transformation, and the accelerated acquisition of technical skills. Yet, amid these sweeping reforms and technologically-driven pedagogies, a critical dimension of human development continues to elude structured curricular frameworks — the Affective Domain.

This domain — encompassing emotional intelligence, attitudes, empathy, values, intrinsic motivation, and ethical reasoning — forms the bedrock of holistic education. Ironically, it is precisely these human-centric attributes that employers, policymakers, and civil society identify as most urgently required in the contemporary world. In a scenario where industries are relentlessly automating technical processes, what remains irreplaceable is trust, empathy, integrity, collaboration, and leadership — quintessential hallmarks of a robust affective foundation.

The Disconnect Between Industry Needs and Academic Outputs

There is a well-documented and widening gap between industry expectations and higher education outcomes. The World Economic

---

*Pro- Chancellor, JIS University. Kolkata, (Ex-Advisor, AICTE and Ex-Scientist, TIFAC/DST). E-mail: nrjsaxena@gmail.com

Forum's *Future of Jobs Report 2023* highlights that while technical upskilling remains critical, the fastest-growing skill demands globally are more towards the affective domain (Table-1).

Table 1: Skill Demands in Affective Domain

Emerging Skill Areas	Growth Rate by 2025
Emotional Intelligence	+33%
Resilience, Stress Tolerance, and Flexibility	+32%
Critical Thinking and Ethical Reasoning	+31%
Leadership and Social Influence	+30%

(Source: World Economic Forum, Future of Jobs Report, 2023)

Employers frequently reiterate the refrain: *"We can train them in technical skills, but we need people with integrity."* This reflects an underlying industry concern that the current educational emphasis on cognitive acquisition fails to prepare students for real-life dilemmas involving ethics, social justice, sustainability, and team dynamics.

A 2022 LinkedIn Global Talent Trends report further emphasizes that 92% of hiring managers rate "soft skills" (rooted in the affective domain) as equally or more important than technical skills. Yet, higher education institutions rarely prioritize affective development systematically within their curricula.

This is not a deficit of students — rather, it is a systemic failure that privileges *what to think* over *how to feel* and *why to act*.

Why the Affective Domain Matters More than Ever

Traditionally, higher education operates within the triad of learning domains: Cognitive (knowledge), Psychomotor (skills), and Affective (attitudes, values). While the first two have received disproportionate attention, the affective domain remains marginalized — often due to its intangible, non-quantifiable nature.

However, in the post-pandemic, digitally-mediated world, where human-machine interaction is pervasive, the affective domain has emerged as indispensable. Graduates navigating careers in public policy, healthcare, digital entrepreneurship, AI ethics, environmental sustainability, and engineering are increasingly expected to engage with complex social, environmental, and ethical challenges.

Moreover, contemporary education faces a crisis of meaning-making. Students equipped with information but devoid of empathy, responsibility, and ethical consciousness risk becoming functionally competent but socially disconnected citizens.

As UNESCO's *Reimagining Our Futures Together* (2021) report advocates, education must shift from solely cognitive development to fostering a "culture of care, empathy, and planetary responsibility."

The Rising Digital Vulnerabilities: A New Mandate for the Affective Domain

In the hyper-connected digital ecosystem, the vulnerabilities facing young learners have escalated dramatically. The *Norton Cyber Safety Insights Report* (2023) reveals alarming trends (Table-2).

Table-2: Threats Facing Young Learners

Digital Threat	Global Incidence (2023)
Cyber Fraud & Scams	1 in 3 individuals targeted
Identity Theft	27% of users affected
Cyberbullying (Teen Users)	37% experienced harassment
Data Privacy Breaches	41% concerned over data misuse

(Source: Norton Cyber Safety Insights Report, 2023)

These challenges are no longer mere technological concerns — they demand emotional resilience, ethical decision-making, empathy, and responsible digital behaviour — all rooted in the affective domain.

Educational institutions can no longer afford to treat such issues as peripheral. Cyber exploitation, mental health crises due to online harassment, and ethical dilemmas around AI and data privacy require a radical recalibration of educational priorities.

Expanding the Need for the Affective Domain: New-Age Digital Challenges

While cognitive and psychomotor skills prepare students to operate within technological systems, the affective domain equips them to navigate the ethical, emotional, and societal implications of these systems. Emerging digital threats underscore the need for affective competencies:

Table-3: Digital Threats Needing Affective Competencies

New-Age Digital Challenges	Affective Domain Competencies Required
Cyber Fraud & Scams	Ethical Reasoning, Digital Responsibility
Data Theft & Privacy Violations	Respect for Privacy, Consent Sensitization
Cyberbullying & Online Abuse	Empathy, Emotional Regulation, Digital Etiquette
Digital Addiction & Mental Health	Self-Awareness, Emotional Resilience
AI Bias & Algorithmic Discrimination	Critical Reflection, Inclusive Mindset

In this context, affective education transcends the notion of "feel-good" learning — it becomes the essential foundation for safety, ethical integrity, and responsible engagement in a digital-first world.

It must be acknowledged — and emphasized — that affective domain skills and attributes cannot be imparted through conventional courses, textbooks, or confined to assessment metrics within classrooms and institutions. Rather, they are best cultivated as students confront real-life challenges, navigate ethical dilemmas, engage in social interactions, and reflect on their experiences beyond the structured walls of academia.

Higher education must, therefore, evolve towards learning ecosystems that expose students to authentic situations—through community engagement, service-learning, ethical simulation exercises, peer collaborations, and experiential learning frameworks — fostering affective growth as a lived, embodied process.

Heutagogy: A Transformative Pathway for Affective Domain Development

While traditional models of education — pedagogy (teacher-directed learning) and andragogy (self-directed learning for adults) — have served well for cognitive and skill-based development, they exhibit profound limitations when addressing the complexities of the affective domain. Neither rigidly structured curricula nor linear instructional designs adequately cater to the personalized, context-dependent, and emotionally embedded nature of values, attitudes, and ethical reasoning.

Emerging educational paradigms now point decisively towards *heutagogy* — a learner-determined approach that places agency, reflection, and capability development at its core. Heutagogy transcends conventional educational boundaries, positioning the learner not merely as a recipient of knowledge but as a co-creator of their learning journey, especially in matters of personal ethics, empathy, emotional intelligence, and social responsibility.

Heutagogy: From Knowledge Transmission to Capability Expansion

In heutagogical learning environments, students are empowered to choose *what* they learn, *how* they engage with learning resources, and most critically, *why* that learning matters to them personally and socially.

This learner agency becomes indispensable when grappling with values-laden, ethically complex, and emotionally sensitive content. Contemporary research affirms that the affective domain thrives in heutagogical spaces characterized by:

Table-4: Affective Domain in Heutagogical Spaces

Core Principles of Heutagogy	Impact on Affective Development
Learner Autonomy	Fosters intrinsic motivation, ownership of values
Capability Focus	Enhances resilience, ethical reasoning, and adaptability
Double-Loop Learning	Encourages critical reflection and questioning of assumptions
Non-Linear, Experiential Learning	Facilitates authentic emotional engagement

(Source: Hase & Kenyon, Heutagogy: The Future of Learning, 2013; Blaschke, Heutagogy and Lifelong Learning, 2012)

Imagine a design student critically examining the ethical implications of surveillance technologies operating in smart cities, not because it is a syllabus mandate, but because it resonates with their lived experience of privacy concerns. Or consider a law student engaged in reflective practice around systemic bias in judicial outcomes — not for grades, but as part of their evolving ethical identity.

These are quintessential heutagogical learning processes — personalized, socially grounded, and affectively rich.

The Rise of Heutagogy in the Digital Age: A Global Trend

Educational futurists and policy frameworks now increasingly advocate for heutagogy as

essential for preparing learners to thrive in VUCA environments (Volatile, Uncertain, Complex, Ambiguous). According to the *OECD Future of Education and Skills 2030* project:

"Learners need to develop agency, ethical awareness, and reflective judgment to navigate complex societal challenges. Heutagogy aligns education with these emerging needs." Recent surveys and reports validate the rising global interest in heutagogical models (Table-5).

Table 5: Rising Global Interests in Heutagogical Model

Global Indicators of Heutagogy Adoption	Percentage of Institutions Reporting Integration
Project-Based, Student-Driven Learning	68% (Higher Ed Institutions, 2023)
Experiential & Community-Based Projects	61%
Reflective Practice & Self-Assessment Tools	57%
Learner Autonomy in Capstone Projects	53%

(Source: EDUCAUSE Horizon Report, 2023)

This growing embrace of heutagogy is not simply an educational trend — it represents a strategic response to a world where learners must constantly adapt, engage ethically, and manage their emotional responses in complex environments.

Beyond the Classroom: Real-World Navigation as the Cradle of Affective Learning

Perhaps the most compelling argument for heutagogy in affective domain development lies in the recognition that affective competencies are rarely, if ever, "taught" in the conventional sense. They are *lived*, *experienced*, and *reflected upon* — emerging through real-world engagement far beyond institutional walls.

Authentic affective learning occurs when students:

- Navigate ethical dilemmas during internships
- Resolve interpersonal conflicts in student governance
- Confront social inequities in community engagement projects
- Reflect on emotional challenges during global exchange programs or service-learning

- Manage digital vulnerabilities in their online presence

These are not peripheral activities — they are the crucibles within which empathy, resilience, ethical reasoning, and social responsibility are forged.

Higher education must, therefore, move decisively towards creating intentional and structured bridges between classroom learning and real-world experiences. Institutions need to design curricula that facilitate *learning through navigation*, wherein students engage with authentic, often unpredictable scenarios requiring emotional intelligence and ethical sensitivity.

The Heutagogical Imperative: Learning Beyond Institutional Boundaries

The deeply personal and experiential nature of affective development demands a radical rethinking of educational design. Heutagogy, by its very philosophy, embraces learning that transcends rigid boundaries — spatial, temporal, and curricular. Future-ready institutions will be those that adopt Heutagogical Strategies with Affective Domain.

Table 6: Heutagogical Strategies with Affective Domain for Future Ready Institutions

Heutagogical Strategy	Affective Outcome Facilitated
Authentic Assessment (Portfolios, Reflections)	Self-awareness, ethical positioning
Experiential Learning in Unstructured Environments	Resilience, adaptability
Interdisciplinary & Socially Relevant Projects	Moral imagination, empathy
Peer-Led Learning Communities	Collaboration, emotional regulation
Real-Life Problem-Solving Opportunities	Ethical reasoning, civic responsibility

(Source: Blaschke & Hase, Heutagogy and the Practice of Self-Determined Learning, 2019)

Thus, heutagogy is not a pedagogical luxury — it is an educational necessity for affective domain development in the 21st century.

Rethinking Curricula: Embedding the Affective Domain as a Cross-Cutting Educational Priority

Integrating the affective domain into higher education is not a matter of simply adding discrete courses on ethics, empathy, or emotional intelligence. Such fragmented interventions risk compartmental-

izing values education as peripheral rather than central to academic and professional formation.

Instead, the most effective curricular strategy involves *deep embedding* of affective learning outcomes across disciplines, pedagogical practices, and assessment systems. This paradigm shift aligns with contemporary educational frameworks, such as the *UNESCO Futures of Education* report (2021), which advocates for "learning to be" and "learning to live together" as core pillars of transformative education.

Strategies for Curricular Transformation: Embedding the Affective Domain

Global thought leaders in education emphasize that fostering affective competencies requires deliberate and systemic curricular redesign. The following strategies represent best practices emerging from both research and institutional innovation:

Table 7: Strategies for Curricular Transformation: Embedding the Affective Domain

Curricular Strategy	Purpose	Affective Outcomes Targeted
Interdisciplinary Themes	Infuse real-world complexity into learning	Ethical reasoning, social responsibility
Real-World Case Studies	Engage students in reflective decision-making	Empathy, critical reflection
Dialogic Classrooms	Foster collaborative meaning-making	Respect for diverse perspectives, emotional regulation
Service Learning	Promote community engagement and social action	Civic responsibility, cultural sensitivity
Reflection as Pedagogy	Enable personal processing of experiences	Self-awareness, emotional growth

(Source: AAC&U, Essential Learning Outcomes, 2022; UNESCO, Education for Sustainable Development, 2021)

Interdisciplinary Themes: Integrating Global Challenges Across Disciplines

Higher education must reorient curricula to grapple with the "grand challenges" of our time — climate justice, data privacy, digital ethics, gender equity, global health, and sustainable development.

Rather than isolating these themes within elective courses, they must be woven throughout disciplines — whether in engineering ethics, management decision-making, design thinking, or media studies.

For instance: A course on Artificial Intelligence in Computer Science should critically examine algorithmic bias and data ethics, fostering students' ethical positioning alongside technical skills.

This approach reflects the *Education for Sustainable Development (ESD)* framework promoted by UNESCO, calling for "integrating sustainability into all aspects of education and learning."

Real-World Case Studies: Engaging with Ethical and Emotional Complexity

Real-world case studies expose students to ambiguous, contested scenarios where decisions have profound ethical and emotional consequences. Examples include:

- Analysing corporate responses to environmental disasters
- Debating ethical dilemmas in digital surveillance technologies
- Examining case studies of medical ethics during pandemics

Such case-based learning has been found to enhance empathy, ethical reasoning, and emotional resilience (Kolb, *Experiential Learning*, 2015).

Dialogic Classrooms: Learning Values through Conversations

Values are rarely internalized through passive content consumption. They are shaped and refined through dialogic engagement — discussions, debates, storytelling, and collective sense-making.

The *Dialogic Pedagogy* approach encourages classrooms to function as communities of inquiry, where learners negotiate meaning collaboratively. This fosters:

- Respect for diverse perspectives
- Emotional regulation in disagreement
- Active listening and empathy

Research indicates that dialogic learning environments significantly enhance socio-emotional competencies (Wegerif, *Dialogic Education*, 2017).

Service Learning: Cultivating Empathy through Community Engagement

Service learning — structured community engagement projects linked to academic learning — provides fertile ground for affective development. Through these experiences, students confront social realities, negotiate cultural differences, and develop civic consciousness. Examples include:

- Working with marginalized communities on health literacy projects
- Participating in environmental sustainability campaigns
- Collaborating with NGOs on education or gender equity initiatives

Institutions practicing service-learning report significant gains in students' empathy, cultural competence, and ethical commitment (Campus Compact Annual Report, 2022).

Reflection as Pedagogy: Creating Space for Personal Meaning-Making

Reflection is indispensable for affective learning. Structured reflection activities — journals, podcasts, blogs, digital portfolios — enable students to process experiences, articulate values, and develop emotional self-awareness. Reflective practice tools to foster affective competencies are mentioned in Table -.

Table 8-Reflective Practice Tools to Foster Affective Competencies

Reflective Tool	Purpose	Affective Competency Developed
Learning Journals	Continuous reflection on experiences	Self-awareness
Digital Portfolios	Curating learning artifacts	Ethical positioning
Podcasts/ Blogs	Articulating perspectives publicly	Emotional expression, empathy

Such practices align with the *Learning Sciences* research emphasizing metacognition and self-regulation as critical to transformative learning (Brookfield, *Becoming a Critically Reflective Teacher*, 2017).

Discipline-Specific Approaches: Activating the Affective Domain Across Fields of Study

While the affective domain must be embedded across curricula, its activation requires contextual strategies within individual disciplines. Faculty members across fields — from STEM to Humanities — can design learning experiences that nurture empathy, ethical reasoning, emotional intelligence, and social responsibility in ways that resonate with their discipline's unique character.

Table-9:Discipline-specific Approaches

Discipline	Examples of Activating the Affective Domain	Affective Outcomes Targeted
Engineering & Technology	Ethical discussions on sustainable design; case studies on AI bias; service-learning for rural technology deployment	Environmental ethics, empathy for end-users, inclusive design thinking
Medicine & Healthcare	Patient empathy simulations; reflections on palliative care; ethical issues in clinical decision-making	Compassion, ethical judgment, cultural sensitivity
Management & Business	Role-plays on ethical leadership; CSR projects; stakeholder empathy mapping	Ethical leadership, social responsibility, emotional regulation
Law & Governance	Case analysis of justice and equity issues; debates on constitutional ethics; experiential learning in legal aid clinics	Moral reasoning, empathy for marginalized communities
Arts, Literature & Humanities	Reflective writing; explorations of human suffering through literature; community-based art projects	Self-awareness, empathy, ethical imagination
Sciences	Ethical implications of biotechnology; environmental responsibility projects; sustainability research	Ethical inquiry, respect for life, social accountability

This approach ensures that affective learning is not peripheral but integral — allowing students to encounter and reflect on values and ethical challenges within their chosen field of study (Table 7).

Training the Teachers: Facilitators of Inner Growth and Ethical Engagement

A transformative curriculum grounded in the affective domain will falter without educators equipped to facilitate inner growth and emotional resilience among students. The future of higher education demands that teachers evolve from being mere transmitters of content to becoming mentors, facilitators, and ethical guides who model the very values they seek to cultivate.

However, traditional teacher training programs in India and globally have predominantly focused on subject-matter expertise, instructional design, and classroom management. Far less attention has been paid to developing the competencies required to nurture the affective growth of learners — a critical gap that calls for urgent redress.

As articulated in UNESCO's *Teacher Policy Development Guide* (2019), modern educators must be prepared not only to teach but to "shape character, foster emotional well-being, and create inclusive learning spaces."

Key Shifts Required in Teacher Training for the Affective Domain

Table 10 : Key Shifts Required in Teacher Training for the Affective Domain

Training Focus	Purpose	Key Affective Competencies Developed
Emotional Intelligence Development	Enhance teachers' own emotional awareness	Self-regulation, empathy, authentic communication
Heutagogical Facilitation Skills	Enable learner-centred exploration	Adaptive guidance, tolerance for ambiguity
Safe Space Creation	Build psychologically safe environments	Trust, openness, respectful dialogue
Mentorship over Instruction	Foster relational guidance	Active listening, ethical leadership
Reflective Professional Development	Support teachers' ongoing affective journey	Critical self-reflection, growth mindset

(Source: UNESCO, 2019; Goleman, Emotional Intelligence, 1995; Blaschke, Heutagogy and Lifelong Learning, 2012)

Strengthening Teacher Training for Affective Assessment and Facilitation

Embedding the affective domain within higher education thus requires a paradigmatic re-imagining of faculty development programs. Teachers must be equipped not only to observe, but to intentionally guide, nurture, and assess affective learning outcomes — a skill set rarely addressed in conventional teacher education.

Training Teachers as Affective Facilitators

Faculty training must include experiential modules focusing on:

- *Recognizing affective cues* in student engagement, emotional responses, and interpersonal behaviour.
- *Facilitating reflective discussions* on ethical dilemmas, digital conduct, and social responsibility.
- *Modelling emotional intelligence* and ethical reasoning through authentic classroom engagement.

Assessment of Affective Learning Outcomes

Moving beyond cognitive evaluation, teachers should be trained to design tools for assessing affective growth, including:

Table-11: Assessment of Affective Learning Outcomes

Assessment Tool	Application	Affective Domain Focus
Reflective Journals	Encourage personal meaning-making	Self-awareness, ethical positioning
Case-Based Discussions	Simulate real-world ethical complexity	Empathy, critical reflection
Rubrics for Affective Outcomes	Structure assessment of values	Ethical reasoning, teamwork
Observation Protocols	Evaluate collaborative behaviour	Emotional regulation, social responsibility

Recent studies (Heckman & Kautz, *Skills for Social Progress*, OECD, 2014) confirm that structured assessment of non-cognitive skills significantly enhances student motivation, retention, and ethical engagement.

Equipping Educators for Emerging Challenges in the Digital and Emotional Landscape

The contemporary educational context — shaped by increasing digital engagement, cyber vulnerabilities, and social fragmentation — demands that teachers be prepared to guide students through complex emotional and ethical terrains.

Digital Well-being and Cyber Ethics Training

Faculty development programs must include:

- *Workshops on online behaviour*, privacy rights, cyberbullying prevention, and digital empathy.

- *Scenario-based learning* to help teachers navigate sensitive conversations on cyber fraud, data privacy, and misinformation.

Such training aligns with initiatives like the *AICTE's National Educational Alliance for Technology (NEAT)* and UNESCO's *Guidelines for Digital Learning* (2022).

Peer Mentoring and Learning Communities for Teachers

Building institutional cultures that support affective pedagogy requires collaborative spaces for faculty to:

- Share best practices

- Reflect on classroom experiences

- Co-develop affective assessment strategies

Cross-disciplinary learning communities have been found to increase teaching efficacy and emotional resilience (Brookfield, 2017).

Recommendations for Teacher Training: Institutionalizing Affective Pedagogy

To mainstream the affective domain in higher education, the following structured recommendations are proposed for academic institutions and policymakers (Table 12).

These interventions align with *National Education Policy (NEP) 2020* recommendations for continuous professional development and holistic education.

Assessing What Truly Matters: Rethinking Evaluation for the Affective Domain

Assessment drives learning. In higher education, what we choose to assess ultimately signals what we value. Traditionally, the emphasis has overwhelmingly favoured cognitive outcomes — knowledge acquisition, technical skills, and problem-solving — because these are easier to measure using standardized testing methods.

However, the affective domain — encompassing values, attitudes, empathy, emotional intelligence, and ethical reasoning — resists such reductionist assessment approaches. Unlike a quantitative exam score, the growth of a learner's emotional maturity or ethical sensibility cannot be captured through conventional testing.

Yet, the challenge of assessment in the affective domain is not insurmountable. It demands an intentional shift towards authentic, process-oriented, and holistic methods that honour the complexity of human development.

As articulated by Bloom (1964) and reaffirmed in UNESCO's *Reimagining our Futures Together*

Table 12: Recommendations for Teacher Training

Recommended Intervention	Implementation Strategy	Expected Outcome
Affective Pedagogy Training Modules	Integrate into faculty induction programs	Enhanced affective facilitation skills
Workshops on Affective Assessment	Develop rubrics for empathy, ethics, reflection	Systematic assessment of non-cognitive skills
Emotional Intelligence Certification	Partner with EI training organizations	Faculty emotional competence development
Digital Ethics and Well-being Programs	Offer CPD courses on cyber ethics	Faculty preparedness for digital challenges
Reflective Practice Mechanisms	Encourage journaling, retreats, peer feedback	Faculty self-awareness and growth mindset

(2021), "Assessment must move beyond measuring what students know, to valuing who they are becoming."

Emerging Approaches for Assessing Affective Learning Outcomes

To effectively evaluate growth in the affective domain, educational institutions must adopt multi-dimensional assessment strategies that capture process, reflection, and real-world application.

Portfolio-Based Assessment

Students curate an evolving portfolio that serves as evidence of their affective journey across diverse learning experiences. This may include:

- Reflective essays on ethical dilemmas encountered.
- Peer feedback summaries highlighting interpersonal strengths and areas for growth.
- Documentation of participation in community engagement or social innovation projects.
- Self-assessments tracking growth in empathy, teamwork, or ethical reasoning.

Such portfolios provide a longitudinal and personalized view of a learner's development — aligning with global best practices in formative assessment (OECD, 2014).

360-Degree Feedback Mechanisms

Affective learning is best understood through multiple perspectives. Incorporating structured feedback from peers, mentors, faculty, and community partners can offer a comprehensive view of students' relational skills, ethical conduct, and emotional intelligence in action.

This approach also aligns with AICTE's push towards Outcome-Based Education (OBE) where multi-source evidence supports learner evaluation.

Narrative Evaluation Systems

Moving beyond grades, narrative evaluations offer qualitative feedback that emphasizes *who the student is becoming*, rather than merely *what the student knows*. Feedback is provided on dimensions such as:

- Respectful communication.
- Capacity for empathetic listening.
- Ethical leadership in collaborative settings.

- Emotional resilience in challenging situations.

Institutions such as Hampshire College (USA), renowned for its narrative evaluation system (Hampshire College, n.d.), and Ashoka University (India), which integrates reflective practices and qualitative feedback in its liberal arts curriculum (Ashoka University, n.d.), have demonstrated effective models for foregrounding affective learning.

Structured Self-Reflection Logs

Reflection is the cornerstone of affective development. Teachers can guide students to maintain structured reflection logs with periodic prompts such as:

- "Describe a recent situation where you practiced empathy. What did you learn about yourself?"
- "What ethical challenges have you encountered in your project work? How did you navigate them?"
- "Reflect on a moment of failure — how did you respond emotionally and what insights did it offer?"

Such reflective tools foster metacognition, self-awareness, and ownership of personal growth.

Project-Based Evaluation with Embedded Affective Criteria

Authentic learning emerges from real-world engagement. Socially-impactful projects — especially those involving community interaction, social innovation, or service-learning — provide fertile ground for assessing affective competencies.

Teachers can create rubrics that assess Indicators of Student Performance in Affective Criteria as depicted in Table-13.

Table-13: Affective Criteria and Indicators of Student Performance

Affective Criteria	Indicators of Student Performance
Empathy with Stakeholders	Demonstrates understanding of diverse perspectives and needs.
Ethical Reasoning	Applies ethical principles in decision-making processes.
Cultural Sensitivity	Respects and navigates cross-cultural dynamics effectively.
Collaboration	Engages constructively with team members; manages conflict ethically.

This approach echoes the *SDG4.7* emphasis on Education for Sustainable Development and Global Citizenship promoted by UNESCO.

Moving Forward: Institutionalizing Affective Assessment

To truly assess what matters, higher education institutions must:

- Integrate affective assessment criteria across courses and co-curricular programs.

- Train faculty to design reflective assignments, create rubrics for values-based learning, and offer constructive narrative feedback.

- Leverage digital platforms (Learning Management Systems) to support portfolio submission, reflective journaling, and peer feedback mechanisms.

- Recognize affective development formally in transcripts or graduation portfolios as part of holistic student evaluation.

Assessment in the affective domain does not seek to rank students, but to illuminate growth, foster ethical engagement, and nurture emotionally intelligent citizens ready to contribute to society with integrity and compassion.

Leveraging AI and Digital Platforms for Affective Learning: Technology as an Enabler of Inner Growth

In contemporary discourse on education, digital technology is often perceived as a double-edged sword — while it has democratized access to knowledge, it is also accused of eroding human connection, fostering superficial engagement, and amplifying emotional isolation.

Yet, this narrative overlooks a transformative possibility: when thoughtfully designed and ethically deployed, digital platforms — especially powered by Artificial Intelligence (AI) — can serve as powerful enablers of affective learning.

In fact, the integration of technology into education offers unprecedented opportunities to personalize emotional development, facilitate reflective practices, and foster global empathy across cultural and geographic boundaries.

As per the *UNESCO Futures of Education Report (2021)*, "Digital spaces, if crafted with care, can expand human solidarity and foster affective engagement at scale."

AI-Powered Reflection Tools: Catalyzing Emotional Self-Awareness

AI-driven journaling platforms and conversational chatbots are emerging as vital tools for facilitating guided reflection and emotional self-awareness. These systems can prompt learners to explore their feelings, unpack ethical dilemmas, and track their affective growth over time.

For instance, platforms like *Replika* or *Wysa* have demonstrated the potential of AI companions to provide non-judgmental spaces for emotional expression and reflective dialogue. In educational settings, customized AI tools can support students in maintaining reflective logs, prompting them with questions such as:

- "What emotions did you experience during your team project, and why?"

- "Reflect on a decision you made — what ethical considerations shaped your choice?"

Such tools enable scalable affective support, especially in large classrooms where individualized mentoring may be limited.

Virtual Communities: Cultivating Global Empathy and Collaborative Ethics

Digital platforms facilitate the formation of virtual communities where learners from diverse backgrounds engage in collaborative projects, cross-cultural dialogues, and digital storytelling.

Participatory platforms like *Global Nomads Group* or *Design for Change* exemplify how online engagement can foster intercultural empathy, collective problem-solving, and ethical discourse on global challenges.

For higher education institutions, leveraging virtual exchanges, online service-learning projects, and global hackathons provides fertile ground for affective learning that transcends geographical boundaries.

Sentiment Analysis and Emotional Feedback: Data-Informed Affective Insights

AI-powered sentiment analysis tools can assist both students and educators in tracking emotional tone and affective expression in written reflections, discussion forums, or feedback exchanges.

Such analytics, when used ethically and transparently, can offer students insights into their communication styles, emotional biases, and growth areas.

For example, platforms like *Reflect* integrate sentiment analysis into journaling apps, prompting users to observe patterns in their emotional expression over time — fostering metacognition and emotional regulation.

Gamified Ethics Simulations: Practicing Decision-Making in Safe Digital Spaces

Gamification, when aligned with affective learning goals, can immerse students in simulated ethical dilemmas requiring real-time decisions, empathy-driven choices, and reflection on consequences.

Virtual reality (VR) and augmented reality (AR) simulations can place learners in scenarios such as:

- Navigating corporate social responsibility challenges.
- Mediating cultural conflicts in a globalized workspace.
- Responding to cyberbullying incidents with ethical sensitivity.

These experiential tools cultivate ethical reasoning, resilience, and empathy in controlled, yet emotionally engaging environments.

Adaptive Learning Paths: Personalizing Affective Development

AI-enabled adaptive learning systems can tailor content delivery not just based on cognitive mastery, but also considering learners' emotional readiness, values, and personal interests.

Such systems can guide students towards reflective readings, ethical case studies, or collaborative projects aligned with their evolving affective profiles — fostering self-directed growth and intrinsic motivation.

Platforms like *Civitas Learning* or *Ment.io* have begun integrating behavioural and engagement data to personalize learning pathways beyond academic content.

Reframing Technology: From Distraction to Connection

The essential lesson is clear: Digital tools are not antithetical to affective learning — they are, in fact, its potential accelerators. However, their success depends entirely on intentional design, ethical deployment, and pedagogical framing.

Technology must be harnessed to deepen human connection, foster emotional intelligence, and create inclusive spaces for ethical dialogue — not to mechanize or depersonalize the learning experience.

Higher education institutions must therefore:

- Integrate digital well-being frameworks in curricula.
- Train faculty in leveraging technology for affective facilitation.
- Develop ethical guidelines for AI-driven learning environments.
- Encourage students to critically engage with their own digital habits and emotional landscapes.

Towards an Affective-Driven Educational Future: Imperatives for Policy, Practice, and Leadership

The preceding discussions underscore a profound educational truth: the future of learning is not solely about what students *know*, but equally about *who they become* in the process of knowing. The affective domain — comprising values, empathy, ethical reasoning, emotional resilience, and human connection — must no longer remain a peripheral concern in higher education. It is, in fact, central to nurturing socially responsible, emotionally intelligent, and ethically grounded graduates.

Achieving this paradigm shift, however, demands systemic commitment — from policy formulation to institutional strategies, from teacher development to technology deployment.

Policy Implications: Institutionalizing Affective Learning

Educational policy frameworks at national and institutional levels must explicitly acknowledge and integrate affective learning outcomes within accreditation standards, quality assurance mechanisms, and graduate attribute declarations.

Regulatory bodies such as AICTE, NAAC, and UGC in India — and their counterparts globally — can mandate:

- The inclusion of affective learning goals in program outcomes.

- Guidelines for holistic student assessment encompassing cognitive, affective, and ethical dimensions.

- Frameworks for faculty development focused on socio-emotional facilitation skills.

Moreover, investment in Digital Ethics Guidelines and AI Governance for education is imperative to safeguard student privacy, emotional data, and ensure responsible technology usage.

Institutional Strategies: Designing for Whole-Person Development

Higher education institutions must transcend disciplinary silos and integrate affective learning across the curriculum, co-curricular programs, and campus culture.

Key strategic directions include:

- Embedding reflective practices, service-learning, and ethical case discussions across all disciplines.

- Establishing Centres for Humanistic Education and Emotional Well-Being to lead capacity building.

- Facilitating student mentorship programs that foreground emotional support and values clarification.

- Creating safe spaces — both physical and digital — for affective expression, dialogue, and community building.

The recent NEP 2020 vision of holistic and multidisciplinary education in India provides a fertile policy landscape for such integration.

Teacher Development: Equipping Educators as Affective Facilitators

Faculty is pivotal in shaping the affective climate of classrooms. However, this requires moving beyond content delivery towards becoming facilitators of reflective dialogue, empathetic engagement, and ethical inquiry.

Professional development programs must include:

- Training in affective assessment tools and feedback mechanisms.

- Workshops on managing emotionally charged discussions and diverse student perspectives.

- Exposure to AI tools that support personalized emotional learning without compromising human connection.

The educator of the future must possess not only pedagogical competence but also emotional intelligence, ethical sensitivity, and digital fluency.

A Call to Action: Reclaiming Humanity in Education

As the world navigates escalating technological disruption, ecological crises, and socio-cultural fragmentation, education faces an existential question:

Will our systems produce technically skilled graduates who are ethically indifferent and emotionally detached — or will we cultivate compassionate, critically conscious, and socially responsible human beings?

The answer lies in our collective will to reimagine education — not as a transactional pursuit of degrees, but as a transformative journey of becoming.

Institutions, policymakers, and educators must embrace affective learning not as an optional add-on, but as the very soul of education.

As *Paulo Freire* profoundly asserted:

"Education either functions as an instrument that is used to facilitate integration of the younger generation into the logic of the present system... or it becomes the practice of freedom — the means by which men and women deal critically and creatively with reality."

The future belongs to educational ecosystems that choose the latter — where learning is deeply human, unapologetically ethical, and courageously compassionate.

Policy Recommendations: Elevating the Affective Domain in Education Systems

For systemic impact, policymakers must recognize the affective domain as integral to educational quality and graduate readiness. Policy frameworks should mandate the integration of affective learning outcomes across disciplines and

establish benchmarks for affective growth alongside cognitive and skill-based assessments.

Recommendations for Policymakers: Embedding Affective Domain in Higher Education Policy

- National Framework for Affective Learning

- Define guidelines for integrating the affective domain across curricula—mandatory for accreditation.

- Incentivizing Affective Teaching Practices

- Recognition awards, grants, and professional credits for institutions and faculty promoting affective education.

- Mandatory Digital Citizenship Curriculum

- Include modules on cyber ethics, privacy, digital empathy, and mental health as essential components of all programs.

- Policy on Teacher Competency in Affective Assessment

- Mandate that teacher qualification frameworks include modules on affective pedagogy and assessment.

- Encourage Industry-Academia Collaboration

- Involve ethical leaders from industry and civil society in curriculum co-design to ensure real-world alignment.

Specific Policy Actions to Consider

- Designing National Frameworks for Affective Education: Establish clear guidelines for integrating emotional intelligence, ethical reasoning, and digital citizenship across higher education curricula.

- Institutional Incentives: Provide grants and recognition for institutions that develop innovative affective learning models or digital ethics programs.

- Teacher Certification Standards: Include affective facilitation skills and ethical digital practices in teacher accreditation processes.

- Digital Well-being Policies: Mandate institutional policies for safeguarding students against cyber threats and promoting emotional well-being in online learning environments.

- Monitoring and Evaluation: Develop assessment rubrics that capture qualitative aspects of learning, including empathy, ethical conduct, and emotional resilience.

Conclusion: The Human Future of Education — Shaping Citizens for Viksit Bharat@2047

In an era defined by artificial intelligence, automation, and digital transformation, the most urgent challenge before higher education is not technological — but profoundly human. India's vision of *Viksit Bharat@2047* — a fully developed, inclusive, and resilient nation — calls for producing not just skilled professionals, but ethically grounded, socially responsible, and emotionally intelligent citizens.

Higher education must evolve from being a knowledge delivery system to becoming a crucible of character formation — balancing intellect with integrity, competence with compassion, and innovation with ethical responsibility. The affective domain — long sidelined in mainstream education — must now become central to this transformative agenda. It is no longer an optional enrichment but a societal necessity.

While heutagogy, digital platforms, and AI-powered tools open exciting possibilities for personalized learning, the essential question persists: *What kind of human beings are we cultivating through education?*

If India is to lead not only in technology but also in humanity; if our graduates are to build not only smart cities but compassionate communities — then affective learning must move from the margins to the mainstream of higher education. This journey begins in classrooms that foster reflection over rote, dialogue over monologue, and values over mere vocationalism. It begins with educators who nurture inner growth and institutions that view education not as a transaction — but as a transformative journey of becoming fully human.

As India advances towards 2047, reclaiming its ethos of humanism and wisdom, the affective domain will emerge as the true educational frontier — the space where a Developed India will discover its soul.

"Education is not preparation for life; education is life itself." — John Dewey

The time to act is now — to reimagine education not only for technological excellence but for human

flourishing. For in shaping the hearts and minds of our learners today, we shape the destiny of India tomorrow.

References and Readings

1. AAC&U (2022). *Essential Learning Outcome,* Association of American Colleges and Universities. Available at: *https://www.aacu.org/resources/value-rubrics/essential-learning-outcomes* (Accessed: 10 April 2025).

2. AICTE (2023). *AICTE IDEA Lab: Enabling Innovation and Experiential Learning,* All India Council for Technical Education. Available at: *https://idea.aicte-india.org/* (Accessed: 9th April 2025).

3. Ashoka University (n.d.). *Centre for Writing and Communication & Reflective Learning Practices,* Ashoka University. Available at: *https://www.ashoka.edu.in/* (Accessed: 10 April 2025).

4. Blaschke, L., M. (2012). 'Heutagogy and Lifelong Learning: A Review of Heutagogical Practice and Self-determined Learning', *International Review of Research in Open and Distributed Learning*, 13(1), pp. 56-71.

5. Blaschke, L., M. and Hase, S. (2019). *Heutagogy and the Practice of Self-Determined Learning: Strategies for Implementation,* Hershey, PA: IGI Global.

6. Bloom, B., S., Mesia, B. ,B. and Krathwohl, D., R. (1964) *Taxonomy of Educational Objectives: The Classification of Educational Goals, Handbook II: Affective Domain,* New York: David McKay Company.

7. Brookfield, S. (2017). *Becoming a Critically Reflective Teacher,* 2nd edn. San Francisco: Jossey-Bass.

8. Campus Compact (2022). *Annual Impact Report: Service-Learning in Higher Education,* Available at: *https://compact.org/impact-report-2022* (Accessed: 9 April 2025).

9. Goleman, D. (1995). *Emotional Intelligence: Why It Can Matter More Than IQ*, New York: Bantam Books.

10. Hampshire College (n.d.). *Assessment & Evaluation,* Hampshire College. Available at: *https://www.hampshire. edu/academics/assessment-evaluation* (Accessed: 10 April 2025).

11. Hase, S. and Kenyon, C. (2013). *Self-Determined Learning: Heutagogy in Action,* London: Bloomsbury Academic.

12. Heckman, J., J. and Kautz, T. (2014). *Fostering and Measuring Skills: Interventions that Improve Character and Cognition,* OECD Education Working Papers, No. 110. Paris: OECD Publishing.

13. Kolb, D., A. (2015). *Experiential Learning: Experience as the Source of Learning and Development,* 2nd edn. Upper Saddle River, NJ: Pearson Education.

14. LinkedIn (2022). *Global Talent Trends Report*. Available at: *https://business.linkedin.com/talent-solutions/resources/talent-strategy/global-talent-trends-2022* (Accessed: 8 April, 2025).

15. Norton (2023). *Cyber Safety Insights Report,* Norton LifeLock Inc. Available at: *https://us.norton.com/internetsecurity-online-scams-cyber-safety-insights-report.html* (Accessed: 8 April 2025).

16. OECD (2014). *Skills for Social Progress: The Power of Social and Emotional Skills,* Paris: OECD Publishing.

17. OECD (2023). *Future of Education and Skills 2030,* Organisation for Economic Co-operation and Development, Available at: *https://www.oecd.org/education/2030-project/* (Accessed: 9 April 2025).

18. UNESCO (2021). *Reimagining Our Futures Together: A New Social Contract for Education,* Paris: UNESCO Publishing.

19. UNESCO (2022). *Guidelines for Digital Learning,* Paris: UNESCO Publishing.

20. Wegerif, R. (2017). *Dialogic Education: Mastering Core Concepts through Thinking Together,* London: Routledge.

21. World Economic Forum (2023). *The Future of Jobs Report 2023,* Geneva: World Economic Forum.

[The views/ opinions expressed in the article are personal] ❑

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.

Reimagining Design Curriculum for Industry 5.0 and Beyond

Rabinder Henry*, Nilima Zade** and Ashtosh Deshmukh***

There has been rapid increase in the number of Higher Education Institutions offering Design based degree programs in India. This has become hallmark for those who wish to pursue degrees without science, technology, engineering and mathematics components. With respect to number of colleges offering undergraduate programs in design in India, there has been steady increment in the number of students enrolled in last five years. But the technology is redefining the way the world is functioning. The growth in Artificial Intelligence, Internet of Things, and miniaturization of electronic devices based virtual world is playing a prominent role in day-to-day life of human being than ever before. This is not reflected in the curriculum which is catering to a technology-based lifestyle and operations. There is a requirement to integrate science, technology, mathematics, engineering into the current design curriculum and *vice versa.*

Evolution of Design as a Discipline

The word 'design' originates from the 14th century Latin word 'designare' which means 'mark out'. It is a compound word consisting of 'de' meaning out and 'signaum' meaning 'to mark'. And the word 'signaum' means 'to mark' or 'to sign'. It is imperative to understand the real meaning of the 'design'. By late 15th century the word in French meant 'to comprehend a plan in mind' and it is a verb, thereby intending 'to devise a scheme in mind'. In 1630's the word took the noun form to represent artistic expression originating from the Italian word 'designo' and later took the French form 'dessin'.

Design as stream had its roots in the artistic world in late European renaissance age. But it was comprehended by the change in technology. That is the industrial revolution in 17th century based on the breakthrough in science and technology led to the industrial upheaval. Thereby, transforming the agrarian way of human life to industrial product-based life. Mechanization and discovery of electrical energy transformed agriculture, transportation and communication in the human society in late 18th century. This led to convergence of artistic aspects into industrial scale products. That is artistic form of expressions through painting, colour theory, carpentry, pottery, metal works and geometry found place in industry products like utensils, storage boxes, carriage appearance, decorative materials etc. The 1st world war further added ease of usability of the products that led to ergonomics and human centred design as part of the industrial manufacturing process. During the Second World War, faster design process and mass production became the hall mark of real industrial age. Professional industrial design became fulcrum of product design and development as part of the defence industry. And these processes slowly and steadily spilled over to all the modern products and gadgets. In the same vein, the invention of transistor in 1947 and the evolution of commercial microprocessors in 1971 led eventually to the electronic age. Impact of electronics and rudimentary computing systems automated many of the electrical systems and products that were the basis of human society till early 1980s. Electronics technology influenced the design process in product development [1] &[2] . The rapid surge in networking of computer by early 1990's (Internet) and the ever-increasing power of microprocessors changed the way in which human societies operate. Simultaneously, the mobile communication revolution around early 2000s changed the perception of technology convergence. Mobile based Information and Communication Technology (ICT) and the advent of touch screen technology revolutionized interaction between human beings and devices. This led to new way of designing products and devices for human consumption. By early 2020's the cognitive technologies including Artificial Intelligence, Robotics, Internet of Things (IoT), Data Analytics, Big Data, Cloud computing etc.

* Professor, Technology, ATLAS SkillTech University, Mumbai, Maharashtra-400070. E-mail: rabinder.henry@atlasuniversity.edu.in

**Assistant Professor, Technology, Symbiosis Institute of Technology, Pune, Symbiosis, Maharashtra-412115 . E-mail: nilima.zade@sitpune.edu.in

***Assistant Professor, Design, ATLAS SkillTech University, Mumbai, Maharashtra- 400070. E-mail: ashutosh@isdi.in

have further impacted the kind of products and services consumed by human society. The virtual space created over the internet and accessed through hand-held devices like mobile phones, laptops etc. have totally transformed the product and service. In tandem design process has been evolving for the virtual space and the physical world. So, any contemporary design course at undergraduate, postgraduate and doctorate level should reflect these aspects.

Design in Virtual Age

End of the day, design is a creative problem-solving process that is necessary to develop innovative solutions, products and services. It is largely focussed on the requirements, identification of the users, market needs and demands. Therefore, it is a process centric approach towards development of new and innovative solutions. In the current Fintech world, design is not about just aesthetics but a technical tool for growth of businesses and profitability. So, it important to integrate scientific business and technology tools within the design curriculum framework

Requirement in Design Education

2020's are characterized by smartphone, digital banks, e-commerce, Fintech, digital or cyber life, human society in post-Covid 19 scenario, have adopted more virtual life than ever before, digital entertainment, electric vehicles, machine learning, digital homes, IoT, robotics, and nano-materials (smart materials). So, every aspect of human life is characterized by technology and especially in a globally interconnected virtual space on the internet through smart phone. Therefore, the industries creating this technology-based services, products and solutions are major employers of modern designers. It is a must that the curriculums through which these designers are groomed gets adequate foundational science-based knowledge, analytical skills, practical skills, entrepreneurial skills, and basic technology skills along with traditional design courses. It is a must that design education is agile, relevant, inter-disciplinary and technology adaptive. With the advent of more interactive technologies like virtual reality, augmented reality, Internet of Things (IoT), wearable electronics, transformable physical structures, smart materials and other emerging areas the design curriculum should be nimble, practical, hands-on, technology based and an ideal

mix of theoretical foundations and practise. This also necessitates the Higher Education Institutions offering design programs to be well equipped with laboratories, studios and contemporary technology tools. Since design education at the juncture of science and art, it is more practical and hands-on. Unless it is supported with individual facilities within the studios and laboratories in the HEI, the industry requirement of well-groomed design professionals may not be achieved.

Design Education in India

The formalized form of design education in India has been around for more than a century. During the British Rule, Dr. Alexander Hunter established the Madras School of Art in the year 1850 as a private institution. This was followed with new schools in erstwhile Calcutta and Bombay. These three institutions were under the government directly. These were based on the British philosophy and pedagogical methods. The first private institution in design in India was established by Maharaja Ram Singh II in the year 1866 in Jaipur. And this institution focussed on the localized arts and industries. After independence, Government of India setup the National Institute of Design (NID) in 1960 based on the report submitted by Charles and Ray Eames [4].

Post Liberalization Scenario

The liberalization policy in 1991 resulted in integration of Indian economy into the globalized network. This was strongly enabled with evolution in computing and internet technologies. The liberalized economy required human resources in emerging technologies of software services and primary digitalization. This led to rapid growth in number of Higher Education Institutions (HEI) offering Science, Technology, Engineering and Mathematics degrees across India. This is evident in the growth of number of engineering colleges offering degrees in India. At the same time number of HEI offering Design courses especially in the privately run institutors has increased post 2010 economic growth [4]. There has been late realization that balancing quantity and quality is not an easy task [4]. Similar, to the growth in the engineering colleges in India between 2000 to 2015, there has been exponential increase in the number of HEI offering design degree programs in 2016. As per the All-India Survey of the Higher Education (AISHE)

report 2010-2011, the number of students enrolled in Bachelor degree programs in design is 2199 while the same number has increased to 28811 in the year 2019-2020. Similar trend can be observed in Master degree programs in design. The enrolment in design related courses has seen 10-fold rises [7].

Curriculum Structure

The current curriculum that is being offered across various universities especially at the undergraduate level is limited to traditional design centric programs. This includes Communication, Interior design, Textile, and industrial design. Some of the universities have added Information Technology contents including Computer Aided Design and Computer Aided Manufacturing tools, multimedia and creative software products to address requirements of the industrial landscape.

Generally, the Bachelor of Design programme consists of three broader bouquets of courses. These three areas are design fundamentals, design studies and design research. But the most important aspects which are missing are the proper integration of science, technology and engineering aspects. 21st and 22nd century is about technology convergence, unification of science and implication of Artificial intelligence Figure 1.

The failure of not integrating conceptual sciences, applied technology and design aspects of engineering are hampering the employability of graduating students from such programs. The employment market by 2030 will be purely based

Figure 1: Design Curriculum Framework & Structure
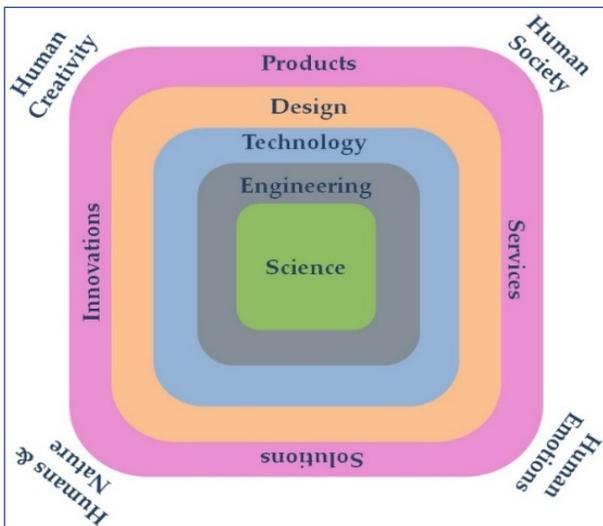
on Industry 5.0 skills. This includes tools built on Industry 4.0 that is about Digitalization. Industry 5.0 is defined by cobots, UDM (Unified Database Management) system platforms, digital twins, smarter AI and Machine Learning algorithms, human centric focus, AI powered bots, Industrial Internet of Things (IIoT), virtualization and automated machines [17].

The design curriculum should address the requirement of the industry by 2030 and beyond (Industry 5.0 & 6.0). Technological and programming skills are the minimum requirement to survive in any industry in the coming years (Figure 2). As AI and Machine learning algorithms are revolutionizing service and manufacturing industries, the curriculum should be able to groom professionals who can design this automation rather than just servicing them. This is at given scenario wherein even services are getting automated using machine learning algorithms.

Figure 2: Design Curriculum for Future Industry
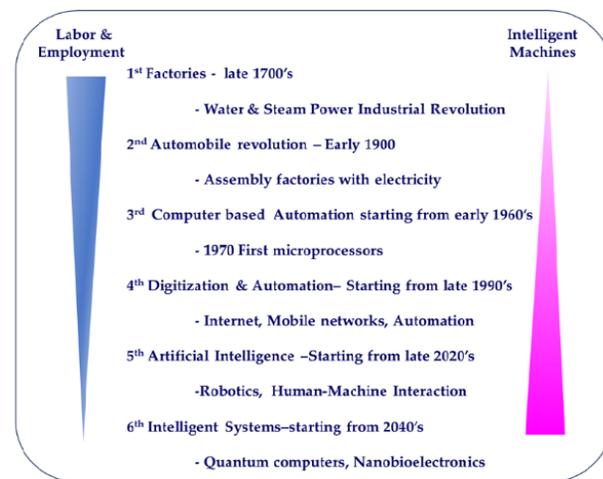
Proposed Changes

To design a larger digital world within a physical world it is imperative that designers are groomed with basic skills in programming, digital technology and mathematics. Industry 5.0 by 2030, is defined by integration of human centric approach along with Artificial Intelligence and high-end robotics. Most of the design curriculum across the universities have adopted the AI part superficially. Only using tools like Chatgpt ,Deepseek or Genimi to create images or texts or codes will not enhance creativity or thought process rather they would will be impediment towards free thinking and imagination. In reality, what is required is designers

who can design AI tools, design complex digital systems, defence systems, AI services, Automation systems and digital products. This requires basic skills in natural sciences, engineering concepts and technology. An integrated design curriculum should have a minimum of 20 % Natural Sciences, 20 % of Engineering and 20 % Technology along with 40 % of design courses (Figure 3). An undergraduate degree of 4 years provides that time line to groom professionals who are designers of the virtual world [17,18]

The new National Education Policy 2020 (NEP 2020) gives the flexibility to include multidisciplinary disciplines within a specific program [9]. A design professional is not only expected to provide aesthetic and human interfaces but also technical solutions. In today's industry creativity, imaginations and technical know-how are must to operate in digital setup. Whether, it is business, transportation industry, aviation industry, pharmaceutical industrial, e-commerce, banking, financial industry, agriculture, space industry, digitalization has led to automation of the operations processes. Therefore, the role of a designer necessitates them to operate in a data world. From social media to agricultural fields analysing the real time data and determining positive solutions is at the centre of designing new products and services [8].

Industry 5.0 is characterized by bots working human beings wherein services and products are meant to be personalized for each individual

Figure 3: Bachelor of Design Curriculum
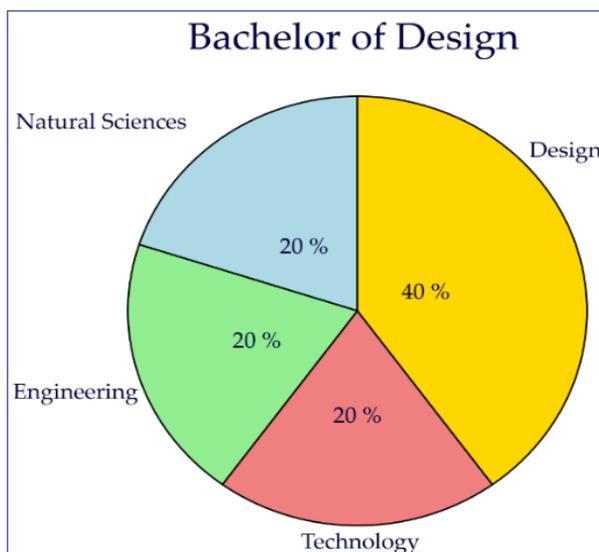
customer. Thereby lies the crux that there will be more requirement for designer who at the least understand the technological world. Even the traditional artistic world has been digitalized. By the turn of the decade, it will be a necessity to understand convergence of different technologies. This requires a basic approach to interdisciplinary learning refer Figure 4. The curriculum would expose the designers to collaborative learning wherein they would be able to communicate with programmers, technology experts, developers, and AI tool developers [10].

Figure 4: Minimum requirement in Design Curriculum
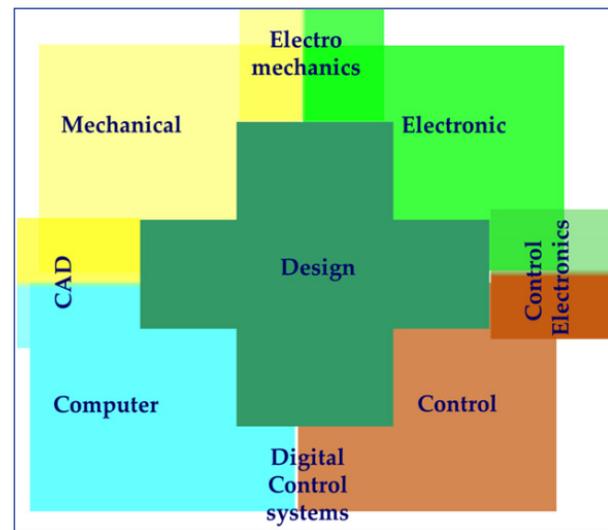
Computational Design Thinking

As the industrial landscape is being transformed into digitized virtual world working with automated machines and services, it is a must for designers to have compactional knowledge to understand and implement models using AI based tools and also to design new AI tools. Along with design thinking the professionals should have a fundamental understanding of computational thinking process. It is must to design entities based on parametric driven data design, to develop aesthetic features. Machine learning based algorithm driven design parameters are at the core of industrial design. Generative AI based approach in must in architecture, user interfaces, and product design [12]. By 2030, the boundary between engineers and designers will not be there. It will be a hybrid profession wherein critical thinking, design thinking and compactional thinking will be seamlessly interplayed. It is must for designers to work with AI models for product

development. AI assisted creativity is rapidly reshaping based on computational aesthetics. This requires basic programming skills, mathematical knowledge in statistics and applied cyber psychology to understand the virtual design aspects in digital systems. Social media, digital marketing, remotely operated IoT systems, digital homes, healthcare data, industrial machines, satellites all are data driven. Analysis of this data allows the designers to understand customer needs and preferences. Similarly spatial design and 3D interfaces will be impacted by AI tools. This requires the designers to have basic understating co-ordinate systems, graph design (mathematics). These few examples referenced here empathize the importance of basic mathematical knowledge in calculus, graph theory, discrete mathematics, applied statistics to understand and construct a digital world [13, 14].

Human Centred AI Design & Engineering

Human -AI collaboration is the fulcrum of Industry 5.0. It is a must that designers understand the ethical complications of AI driven design. The curriculum should also include a module on cyber psychology. That is to make the designers aware of the implications of virtual world on the human thought process and emotional responses. To add value to design aspects the curriculum should include courses of technical problem solving through design thinking. The design program should also include courses on human interactivity with external world through sensors and their interfaces. This requires engineering modules in electronic systems design, ethics in AI, human machines interfaces and engineering system design. AI-Sustainability, engineering optimization, functional and smart materials must be part of the curriculum [15,16].

Intelligent Manufacturing & 3D Printing

In recent years, Rapid Prototyping (RPT) and 3D printing have been adopted by the industry. But only knowing the tools to print is not sufficient for industrial design. In an automated environment, designer with technical know-how of additive manufacturing processes are required. It is imperative that designers are equipped with data-driven decision-making skills. This requires a basic understanding of stochastic processes and pattern recognition. Therefore, it is must to have these courses as part of the curriculum including basics of mathematics, linear algebra and calculus.

Cyber Physical Systems

The Cyber Physical Systems (CPS) are one of the main pillars of Industry 5.0. It allows to combine the efficiency, precision and speed of the machines with imagination, creativity and ingenuity of the human brain. CPS is the means to interface the digital world with physical world including living things. As a designer it is must to understand the basics of material science, material synthesis and digital technologies [20]. The curriculum should also include courses on embedded systems, sensors and actuators, and mechatronic system design. This would allow the designer not only decipher the usability of a product or service but also the implement functionality in real world situations.

Conclusion

In the rapidly changing digital world, it is important to focus on multidisciplinary requirement of professionals to contribute in the industry 5.0 scenario. It is imperative design curriculum include natural sciences, basic engineering courses along with design fundamentals, design studies and design research as part of the undergraduate degree programs. The industry requirement for those enrolling in the coming academic years is combination of AI skills, automation, embedded systems, and design skills.

References and Readings

1. Fujita, Haruhiko (2017). "Art and Design Education in Nineteenth Century India: British Background and Development in South Asia," The Second Asian Conference of Design History and Theory—Design Education beyond Boundaries—ACDHT 2017 TOKYO 1-2 September, Tsuda University.

2. Cross, Anita (1983). "The Educational Background to the Bauhaus," Design Studies, Vol 1(4), pp 43-42, Elsevier.

3. Charles and Ray, Eames (1997). "The India Report" Designed and Printed at National Institute of Design, Ahmedabad.

4. Singh, Antra and Singh, Seema (2014). "Private Engineering Education in India: Past, Present and Future," *International Journal of Management and Social Sciences Research,* 3, 2319-4421.

5. *https://www.thehindu.com/news/national/karnataka/ there-is-a-need-to-improve-the-quality-of-engineering-education/article65373178.ece*

6. *https://www.education.gov.in/sites/upload_files/mhrd/ files/statistics/AISHE201011.pdf*

7. Government of India (2020). All India Survey of Higher Education 2019-2020, Ministry of Education, Government of India, New Delhi, December.

8. Divya Chopra, (2024)."Why do Students Feel Stressed While Planning Careers in the Field of Design?", *India Today*, News Article, January.

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

10. Roberto, Verganti, Luca, Vendraminelli, and Iansiti, Marco (2020). "Design in the Age of Artificial Intelligence," Harvard Business School.

11. Micheli, P., S., J. Wilner, S., H. Bhatti, M. Mura and M., B. Beverland (2019). "Doing Design Thinking: Conceptual Review, Synthesis, and Research Agenda," *Journal of Product Innovation Management,* Vol 36(2), 124-148.

12. Aakansha, Susan Chacko(2024). "Exploring Design Education In The Age of Generative Artificial Intelligence: Opportunities and Challenges," Master Thesis, Georgetown University.

13. Miguel, A., Cardona , Roberto, J., and Rodríguez, Kristina, Ishmael (2023)." Artificial Intelligence and the Future of Teaching and Learning," U.S. Department of Education, Office of Educational Technology, Washington, DC.

14. El Moussaoui, M., and Krois, K. (2023). "Architectural Pedagogy in the Age of AI: The Transformation of a Domain." In: Barosio, M., Vigliocco, E., Gomes, S. (eds) School of Architecture(s) - New Frontiers of Architectural Education, EAAE AC 2023, Springer Series in Design and Innovation , Vol 47. Springer.

15. Yun-Tzu Tien and Rain Chen(2024). "Challenges of Artificial Intelligence in Design Education. In 2024 the 15th International Conference on E-Education, E-Business, E-Management and E-Learning (IC4E) (IC4E 2024), March 18-21, Fukuoka-shi, Japan. ACM, New York, NY.

16. Saritepeci, M., Yildiz Durak, H.(2024). Effectiveness of Artificial Intelligence Integration in Design-Based Learning on Design Thinking Mindset, Creative and Reflective Thinking Skills: An Experimental Study, *Educ Inf Technol* 29, 25175–25209.

17. Meron, Y, Tekmen, Araci, Y.(2023). "Artificial Intelligence in Design Education: Evaluating ChatGPT as a Virtual Colleague for Postgraduate Course Development," *Design Science*.

18. Lee, A.,V.,Y., Tan, S.,C. and Teo, C., L.(2023). " Designs and Practices Using Generative AI for Sustainable Student Discourse and Knowledge Creation," Springer *Smart Learn. Environ.* **10**, 59.

19. Katja Fleischmann (2024). "Generative Artificial Intelligence in Graphic Design Education: A Student Perspective," Canadian Journal of Learning and Technology, Vol 50(1), Alberta, Canada.

20. Wai Yei Leong (2024). "Industry 5.0: Design, Standards, Techniques and Applications for Manufacturing," IET Publications. ❑

A Journey towards Outcome-based Education under National Education Policy–2020

Dibyendu Bhattacharyya* and Subrata Halder**

The National Education Policy–2020 (NEP–2020) represents a transformative shift in India's educational landscape, emphasizing the integration of academic knowledge, practical skills, and experiential learning. This research article explores the implementation of outcome-based education under NEP–2020 through a tri-dimensional approach that balances academic content, skill development, and experiential learning. The study analyzes the credit structure framework that assigns different weightage to various educational activities: 15 hours for academic activities, 30 hours for skill-based activities, and 45 hours for experiential activities per credit. Through qualitative analysis of policy documents and implementation frameworks, this research highlights how the componential flexible curriculum model provides learners with customizable educational pathways while ensuring targeted outcomes. The findings reveal that this integrated approach fosters holistic development, enhances employability, and bridges the gap between theory and practice. The paper concludes by discussing strategies for educational institutions to effectively transition to this outcome-based framework.

India's educational landscape is undergoing a paradigm shift with the implementation of the National Education Policy (NEP) 2020, which represents the most comprehensive reform of education in decades. Central to this policy is the transition toward outcome-based education (OBE), which focuses on what students can achieve rather than merely what they should know. This shift aligns with global educational trends that emphasize competency development over content memorization, preparing learners for the complexities of the 21st-century workforce (Ministry of Education, 2020). The journey toward outcome-based education under NEP–2020 is characterized by a multidimensional approach that integrates academic knowledge, practical skills, and real-world experiences. Unlike traditional educational models that prioritize theoretical understanding, the NEP framework advocates for a balanced development across cognitive, operational, and affective domains (Bhattacharyya, 2022). This balance is achieved through a tri-dimensional approach that assigns appropriate weightage to academic, skill-based, and experiential learning activities. The NEP–2020 envisions a radical reformation of the Indian education landscape by realigning its pedagogical objectives with global standards, particularly focusing on learner-centric, competency-based, and outcome-driven approaches. The introduction of the Outcome-Based Education (OBE) system under NEP–2020 signifies a decisive break from traditional rote learning methodologies. By embedding a Tri-Dimensional model of learning academic, skill-based, and experiential within an integrated credit structure, the policy ensures holistic teacher development, preparing educators for dynamic classroom ecosystems.

The Emergence of Tri-Dimensional Approach

The tri-dimensional approach to education emerged from a recognition that traditional academic metrics alone are insufficient measures of educational quality. This approach conceptualizes education along three interrelated dimensions: academic knowledge, practical skills, and experiential engagement. This thinking represents a departure from conventional educational models that often prioritize academic knowledge at the expense of skill development and experiential learning. By assigning specific credit values to each dimension—15 hours for academic activities, 30 hours for skill-based activities, and 45 hours for experiential activities per credit—the framework ensures that all three dimensions receive appropriate attention in curriculum design and implementation. This background sets the stage for understanding how the tri-dimensional approach operationalizes

---
*Professor, Department of Education, University of Kalyani, Kalyani, Nadia, West Bengal-741235. E-mail: db.ku@rediffmail.com

**Research Scholar, Department of Education, University of Kalyani, Kalyani, Nadia, West Bengal-741235. E-mail: subratah914@gmail.com

outcome-based education under NEP–2020, creating pathways for learners to develop competencies across diverse domains while maintaining flexibility and personalization in their educational journeys.

The NEP–2020's OBE structure is designed around three interrelated axes Viz Academic Axis, Skill Axis, Experiential Axis.

Academic Axis (Flexibility): This dimension provides conceptual depth and theoretical grounding. Learners are allowed flexibility in course selection, enabling personalized and need-based learning pathways. This flexibility supports disciplinary and interdisciplinary growth, strengthening the knowledge base essential for effective teaching.

Skill Axis (Mult Disciplinarity): Skill-based learning is integrated to ensure vocational readiness and employability. Learners engage with practical tools and domain-specific competencies that are essential for 21st-century classrooms and beyond. This axis encourages multidisciplinary engagement, making educators adaptable to varied educational settings.

Experiential Axis (Field Activity): Field-based activities and experiential learning opportunities allow learners to connect theory with practice. This component promotes critical reflection, problem-solving, and participatory learning methods through internships, field visits, community engagement, and school-based experiences.

Fig-1 Tri-Dimensional Model: Contextual Background
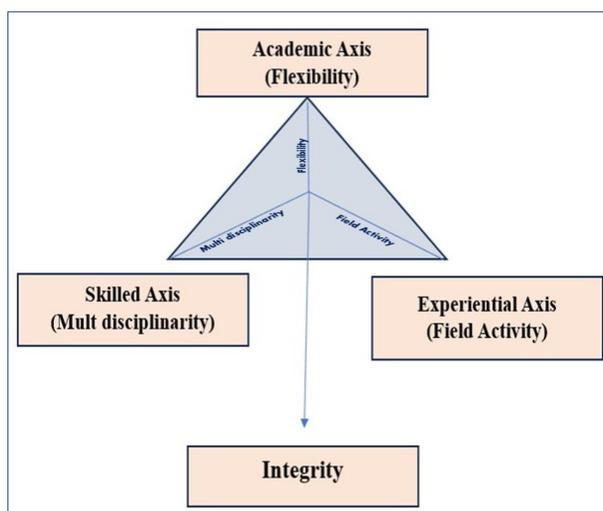
Credit Integration Framework through Integrity

The credit-based structure introduced under NEP 2020 functions as a cohesive unit to unify academic, skill, and experiential learning:

- 1 Academic Credit = 15 Hours
- 1 Skill Credit = 30 Hours
- 1 Experiential Credit = 45 Hours

On average, 30 hours of engagement equate to one integrated credit, ensuring a balanced representation of all three dimensions. Therefore, an average 30 hours is requirement for fulfilment of one Credit being integrated with dimensions mentioned above.

Part of Componential Flexible Curriculum: 1ST Part

The curriculum under OBE is componential and flexible, stands for:

- Students can choose components aligned with their personal and professional goals.
- There is a strong emphasis on vocational integration, where vocational and skill-based activities are blended with academic content.
- Flexibility ensures that learners from diverse backgrounds can pursue education at their pace and level of preparedness.

This structure allows for personalized progression and inclusion, two key values highlighted in the NEP–2020.

Transactional Phase based on Credit Structure: 2nd Part

This part concerns the implementation of the curriculum through teaching, learning, and assessment activities. It represents the execution phase, where the tri-dimensional approach is applied in actual educational practice. Key elements of this part include:

- Tri-Dimensional model to be followed.
- Skill based courses or activity to be merged.   Based on Mult disciplinarity
- Field based activity is always giving the priority.

Assessment and Evaluation: 3RD Part

Traditional examination systems are insufficient to capture the breadth of skills and understanding developed through OBE. Therefore, NEP–2020 promotes a comprehensive evaluation framework, including:

- Field activity assessment
- Skill demonstration and portfolio work
- Content-based validity through continuous assessment

This approach promotes competency-based assessment, wherein students are evaluated not just for what they know but for how effectively they can apply their knowledge (Fig-1).

Fig-1: Outcome based Framework
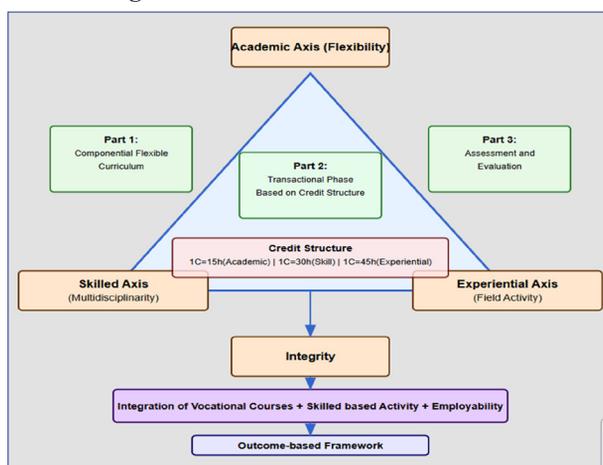
The framework establishes a clear progression from theoretical concepts to practical applications through its three-part structure. It begins with a flexible curriculum that can be tailored to individual needs, moves through a transactional phase based on a standardized credit structure, and culminates in assessment and evaluation. At the heart of this model is the concept of Integrity, which serves as the integration point for all three dimensions. The credit structure provides a concrete mechanism for this integration, with different time allocations reflecting the varying nature of each activity type (15 hours for academic, 30 hours for skill-based, and 45 hours for experiential learning). The framework ultimately leads to the integration of vocational courses, skilled-based activities, and employability considerations, resulting in an outcome-based educational approach. This final integration suggests that the primary goal of this educational model is to produce well-rounded graduates who possess not only theoretical knowledge but also practical skills and real-world experience.

Conclusion

The journey toward outcome-based education under NEP–2020 represents a profound transformation in Indian education—a shift from what students should know to what they can achieve, from standardized delivery to personalized development, from fragmented learning to integrated competencies. The tri-dimensional approach, with its balanced emphasis on academic knowledge, practical skills, and experiential learning, provides a comprehensive framework for this transformation. As educational institutions navigate this journey, they have the opportunity to reimagine not just curricula and pedagogies but the very purpose and process of education. The challenge is significant, requiring changes in mindsets, structures, and practices that have been entrenched for decades. The tri-dimensional approach to outcome-based education is not merely a technical framework but a philosophical reorientation that values different forms of learning and recognizes the interconnectedness of knowing, doing, and experiencing. By embracing this approach, Indian education can move closer to the NEP–2020 vision of an education system that contributes to "an equitable and vibrant knowledge society" through holistic, flexible, and outcome-oriented learning experiences.

References and Readings

1. Bhattacharyya, D. (2022). Componental Flexible Curriculum for Implementing National Education Policy-2020: A Stage-Specific Subjective Approach, *University News, 61*(03), 22-25.

2. Bhattacharyya, D. (2024). *Integrated Teacher Education Programme (ITEP) Curriculum Framework,* University of Kalyani.

3. Central Board of Secondary Education (2020). *21st Century Skills Handbook.*

4. Darling-Hammond, L. (2017). Teacher Education around the World: What can we Learn from International Practice? *European Journal of Teacher Education, 40*(3), 291-309.

5. Kumar, R., and Sharma, P. (2020). Teacher Education in India: Issues and Concerns, *Journal of Education and Practice, 11*(12), 45-52.

6. Government of India (2020). National Education Policy 2020, Ministry of Education, Government of India, New Delhi. *https://www.education.gov.in/sites/upload_files/mhrd/files/NEP_Final_English_0.pdf*

7. National Council for Teacher Education (NCTE). (2021). *Curriculum Framework for Four-year Integrated Teacher Education Programme (ITEP).*

8. University Grants Commission (2024). *National Credit Framework (NCrF) Guidelines,* University Grants Commission, New Delhi.   ❑

Towards Inclusive Excellence: Strategies for Promoting Diversity and Equity in Higher Education Institutions

Atul Krishna Ghadge*

In recent years, we have experienced drastic changes in the education system in India, fostering inclusive excellence has emerged as a critical imperative for academic institutions. This work delineates evidence-based strategies essential for promoting diversity and equity within Indian higher education contexts. Drawing upon empirical data from national surveys and institutional case studies, alongside seminal works by scholars such as Gurin et al. (2002), Hurtado et al. (2003), and Desai (2010), it underscores the transformative potential of embracing diversity as a catalyst for academic excellence and societal advancement. Statistical analyses reveal stark disparities in access and attainment across various demographic groups, highlighting the urgent need for proactive interventions to mitigate inequities. For instance, recent data from the Ministry of Education's Higher Education Survey (2023) demonstrate significant gaps in enrollment and graduation rates among underrepresented communities, underscoring the imperative of targeted strategies to promote equitable access and success. Institutions like the Indian Institutes of Technology (IITs), Tata Institute of Social Sciences (TISS), and Jawaharlal Nehru University (JNU) are actively engaged in initiatives aimed at addressing these disparities through targeted recruitment and retention efforts.

Qualitative data gleaned from focus groups and interviews provide nuanced perspectives on the experiences and challenges faced by marginalized communities within higher education institutions. These narratives illuminate the lived realities of students and faculty members belonging to diverse socio-cultural backgrounds, shedding light on systemic barriers and opportunities for meaningful intervention. The paper further examines the pivotal role of institutional policies and practices in fostering a culture of inclusivity. Insights from works by Chang et al. (2011), Milem (2003), and Aggarwal (2018) underscore the importance of implementing inclusive policies and providing support services tailored to the needs of diverse student populations. It explores the significance of curriculum development and pedagogical approaches that integrate diverse perspectives and foster critical consciousness among learners. By synthesizing empirical data with theoretical frameworks, this paper offers evidence-based recommendations for advancing diversity, equity, and inclusion agendas in Indian higher education institutions. Ultimately, it aims to contribute to the realization of inclusive excellence and societal progress in the Indian educational system.

Current Disparities in Access, Enrollment, and Graduation Rates

In the system of Indian higher education, disparities persist in access, enrollment, and graduation rates across various demographic groups, underscoring the urgent need for targeted interventions to promote equity and inclusivity. According to recent data from the Ministry of Education's Higher Education Survey (2023), significant gaps exist in educational attainment based on factors such as socio-economic status, gender, and geographical location. For instance, marginalized communities such as Scheduled Castes (SCs), Scheduled Tribes (STs), and Other Backward Classes (OBCs) continue to face barriers in accessing higher education opportunities, with lower enrollment rates compared to their counterparts from privileged backgrounds (Kumar, 2020). Disparities are evident in the distribution of educational resources and infrastructure, exacerbating inequities in educational outcomes. Rural and remote areas often lack adequate educational institutions and quality teaching staff, further marginalizing students from these regions (Singh et al., 2018).

Gender disparities persist, with women facing systemic barriers to accessing higher education, particularly in STEM (Science, Technology, Engineering, and Mathematics) fields (Mishra & Roy, 2019). These disparities in access and enrollment have far-reaching consequences,

*Assistant Professor, Department of Business Economics, Changu Kana Thakur Arts, Commerce and Science College, New Panvel (W), Maharashtra- 410206. E-mail: atulghadge007@ gmail.com

contributing to inequalities in socio-economic opportunities and perpetuating cycles of poverty and exclusion. Furthermore, they undermine the nation's efforts to achieve inclusive growth and sustainable development (Narayan & Pritchett, 2019). Addressing these disparities requires a multifaceted approach encompassing policy reforms, targeted outreach programs, and investments in educational infrastructure and resources. Initiatives such as the National Fellowship Scheme for SC/ST students and the RUSA (Rashtriya Uchchatar Shiksha Abhiyan) program aim to enhance access and equity in higher education by providing scholarships, infrastructure grants, and capacity-building support to institutions serving marginalized communities (Government of India, 2021). By acknowledging and addressing these disparities, Indian higher education can fulfill its mandate of providing equitable opportunities for all citizens, thereby contributing to social cohesion and national development. However, concerted efforts are needed to translate policy commitments into tangible outcomes and ensure that no individual is left behind in the pursuit of higher education and socio-economic mobility.

Significance of Inclusive Excellence for Academic Quality and Social Justice

In Indian higher education, embracing inclusive excellence holds profound significance for both academic quality and social justice. It serves as a cornerstone for fostering a learning environment that values diversity, promotes equity, and cultivates intellectual growth among students and faculty alike. Research indicates that diverse educational environments enhance critical thinking, problem-solving, and creativity, leading to enriched learning experiences and improved academic outcomes (Gurin et al., 2002; Hurtado et al., 2003; Desai, 2010). Inclusive excellence is essential for promoting social justice by dismantling barriers to access and opportunity, particularly for historically marginalized communities. By creating pathways for individuals from diverse backgrounds to participate fully in higher education, institutions can contribute to the empowerment and socio-economic advancement of underrepresented groups (Kumar, 2020; Mishra & Roy, 2019). Fostering inclusive excellence fosters a culture of belonging and mutual respect, where individuals feel valued and supported regardless of their background or identity. This sense of inclusivity enhances student engagement, retention, and overall satisfaction with the learning experience, leading to a more vibrant and dynamic academic community (Singh et al., 2018; Narayan & Pritchett, 2019).

Recognizing the interdependence of academic quality and social justice, Indian higher education institutions are increasingly prioritizing initiatives aimed at promoting inclusive excellence. These efforts encompass curriculum reforms, faculty development programs, and student support services designed to create inclusive learning environments that reflect the diversity of India's social fabric (Government of India, 2021). By embracing inclusive excellence, Indian higher education institutions can fulfill their mandate of fostering academic excellence while advancing social justice and equity. However, realizing this vision requires sustained commitment and collaboration from all stakeholders, including policymakers, institutional leaders, faculty, students, and civil society organizations. Only through collective action can Indian higher education truly embody the principles of inclusivity, excellence, and social justice that are essential for the nation's progress and prosperity.

Empirical Evidence Supporting Interventions for Diversity and Equity

In the context of Indian higher education, empirical evidence plays a crucial role in informing interventions aimed at promoting diversity and equity. Rigorous research studies, national surveys, and institutional assessments provide valuable insights into the nature and extent of disparities across various demographic groups, guiding policymakers and institutional leaders in the design and implementation of targeted interventions. For instance, data from the Ministry of Education's Higher Education Survey (2023) offer a comprehensive overview of enrollment patterns, graduation rates, and academic achievement disaggregated by socio-economic status, gender, caste, and geographical location. These empirical findings highlight disparities in access to higher education opportunities and underscore the urgent need for affirmative action measures to address systemic barriers faced by marginalized communities (Kumar, 2020). Empirical research studies conducted by scholars such as Mishra & Roy (2019) and Singh et al. (2018) provide deeper insights into the factors contributing to disparities in educational outcomes and the efficacy of interventions aimed at promoting

diversity and equity. These studies employ a variety of quantitative and qualitative research methods, including surveys, interviews, and focus groups, to examine the experiences and perspectives of students, faculty, and administrators from diverse backgrounds.

The empirical evidence generated through such research endeavors serves as a catalyst for evidence-based policymaking and institutional reforms. It informs the development of targeted interventions, such as scholarship programs, mentorship initiatives, and diversity training workshops, designed to enhance access, retention, and success for underrepresented groups in higher education (Government of India, 2021). By leveraging empirical evidence, Indian higher education institutions can tailor interventions to address the specific needs and challenges faced by marginalized communities, thereby advancing the principles of diversity, equity, and inclusion. However, ongoing data collection and research are essential to monitor progress, evaluate the effectiveness of interventions, and identify areas for further improvement in the pursuit of inclusive excellence.

Role of Institutional Policies in Fostering Inclusivity

In Indian higher education, institutional policies play a crucial role in shaping the educational experiences and opportunities available to students from diverse backgrounds. These policies encompass a wide range of initiatives aimed at fostering inclusivity, promoting equity, and ensuring equal access to educational resources and opportunities. One key aspect of institutional policies is the admission process, which serves as a gateway to higher education. Many Indian universities and colleges have implemented affirmative action policies, such as reservation quotas for students from historically marginalized communities, including Scheduled Castes (SCs), Scheduled Tribes (STs), and Other Backward Classes (OBCs). These policies aim to redress historical injustices and create pathways for underrepresented groups to access higher education (Kothari, 2019). Institutional policies often include financial aid programs and scholarship schemes targeted at students from low-income backgrounds. These initiatives help alleviate financial barriers to education and ensure that students have access to the resources and support

they need to succeed academically (Mishra & Roy, 2019). In addition to admissions and financial aid, institutional policies also encompass support services and accommodations for students with disabilities, ensuring that they have equal access to educational opportunities and facilities. These policies may include provisions for accessible classrooms, assistive technologies, and specialized academic support services tailored to the needs of students with disabilities (Government of India, 2016).

Institutional policies often address issues related to diversity and inclusion in curriculum development, faculty recruitment, and campus climate. Universities and colleges may implement initiatives to promote diversity in the curriculum, such as offering courses on diversity, equity, and social justice, or incorporating diverse perspectives into existing courses across disciplines (Bakshi, 2018). Similarly, institutions may adopt inclusive hiring practices to recruit a diverse faculty and staff body that reflects the diversity of the student population. By promoting diversity among faculty members, institutions can provide students with role models and mentors from diverse backgrounds, fostering a sense of belonging and academic success (Bhandari & Desai, 2018). Institutional policies play a critical role in fostering inclusivity and promoting equity within Indian higher education. By implementing affirmative action measures, financial aid programs, support services, and inclusive hiring practices, institutions can create more inclusive learning environments that empower students from diverse backgrounds to thrive academically and contribute to society. However, ongoing evaluation and refinement of these policies are essential to address emerging challenges and ensure that all students have equal opportunities to access and succeed in higher education.

Initiatives by Leading Indian Higher Education Institutions

Leading Indian higher education institutions, such as the Indian Institutes of Technology (IITs), Tata Institute of Social Sciences (TISS), and Jawaharlal Nehru University (JNU), play a pivotal role in advancing diversity and equity agendas within the Indian educational landscape. These institutions have implemented a range of initiatives aimed at promoting inclusive excellence and addressing disparities in access and opportunity.

For example, the Indian Institutes of Technology (IITs), renowned for their excellence in technical education, have launched outreach programs targeting underprivileged communities to encourage participation in engineering and technology fields. These initiatives include coaching programs, mentorship schemes, and outreach events aimed at inspiring and supporting students from marginalized backgrounds to pursue higher education in STEM disciplines (Sinha et al., 2017). Similarly, the Tata Institute of Social Sciences (TISS), with its focus on social sciences and social work education, has pioneered efforts to promote diversity and inclusivity within the field of social sciences. TISS has established affirmative action policies, such as reserved seats and financial aid programs, to ensure equitable access for students from marginalized communities. Additionally, the institute offers interdisciplinary courses and research opportunities that address pressing social issues and promote social justice (TISS, n.d.).

Jawaharlal Nehru University (JNU), known for its commitment to academic freedom and social justice, has implemented various initiatives to foster diversity and equity among its student body and faculty. The university has a robust affirmative action policy that reserves seats for students from SC, ST, and OBC categories, along with financial assistance schemes to support their education. Furthermore, JNU promotes interdisciplinary research and inclusive pedagogical practices that encourage critical thinking and engagement with diverse perspectives (JNU, n.d.). These initiatives by leading Indian higher education institutions serve as exemplars of best practices in promoting diversity, equity, and inclusion. By leveraging their institutional resources and expertise, these institutions are making significant strides towards creating more inclusive learning environments and advancing social justice agendas within the Indian higher education sector. However, ongoing efforts and collaborations are essential to scale up these initiatives and address systemic barriers to access and success for underrepresented groups.

Challenges and Opportunities in Promoting Diversity and Equity

In the pursuit of promoting diversity and equity within Indian higher education, several challenges and opportunities emerge, shaping the trajectory of inclusive excellence initiatives.

Challenges

- Socio-economic disparities: Persistent socio-economic inequalities pose significant barriers to accessing higher education for marginalized communities, perpetuating cycles of disadvantage and exclusion (Kumar, 2020).

- Cultural biases and stereotypes: Deep-rooted cultural biases and stereotypes contribute to discrimination and marginalization within educational institutions, hindering efforts to create inclusive learning environments (Mishra & Roy, 2019).

- Limited access to resources: Unequal distribution of educational resources and infrastructure, particularly in rural and remote areas, restricts access to quality education for students from marginalized backgrounds (Singh et al., 2018).

- Resistance to change: Resistance from entrenched power structures and institutional inertia may impede efforts to implement inclusive policies and practices, necessitating sustained advocacy and activism (Bakshi, 2018).

- Intersectionality of identities: Intersectional identities, such as caste, class, gender, and disability, intersect to compound marginalization and discrimination, requiring holistic and intersectional approaches to address systemic inequalities (Narayan & Pritchett, 2019).

Opportunities

- Policy reforms: Opportunities exist to enact policy reforms that promote diversity and equity, such as revising admission criteria, expanding scholarship programs, and strengthening anti-discrimination laws

- Technological innovations: Leveraging technology, such as online learning platforms and digital resources, can enhance access to education and facilitate inclusive teaching and learning practices (Bhandari & Desai, 2018).

- Collaborative partnerships: Collaborations between government agencies, educational institutions, civil society organizations, and private sector entities can amplify efforts to promote diversity and equity, leveraging collective resources and expertise (Kothari, 2019).

- Community engagement: Engaging with local communities and stakeholders can foster greater

inclusivity and relevance in higher education, incorporating diverse perspectives and knowledge systems into educational programs and research agendas (Bakshi, 2018).

- Cultivating inclusive leadership: Developing inclusive leadership capabilities among institutional leaders and faculty members can foster organizational cultures that prioritize diversity, equity, and inclusion, driving systemic change within educational institutions (Bhandari & Desai, 2018).

Navigating these challenges and seizing opportunities requires a concerted and multifaceted approach, involving stakeholders from diverse sectors and backgrounds. By focusing systemic barriers, fostering collaboration, and cultivating inclusive leadership, Indian higher education institutions can advance towards a more equitable and inclusive future, where all individuals have equal opportunities to access and succeed in higher education.

Recommendations for Advancing Diversity and Inclusion Agendas

- Policy reforms: Advocate for policy reforms at the national and institutional levels to strengthen affirmative action measures, expand scholarship programs, and enact anti-discrimination laws that promote diversity and equity in higher education.

- Inclusive curriculum: Integrate diversity, equity, and social justice themes into the curriculum across disciplines, offering courses that explore diverse perspectives and histories to cultivate critical consciousness and empathy among students (Bakshi, 2018).

- Faculty development: Provide training and support for faculty members to enhance their cultural competency, inclusive teaching practices, and awareness of systemic biases, ensuring that they create supportive and inclusive learning environments for all students (Bhandari & Desai, 2018).

- Student support services: Expand access to academic and psychosocial support services, such as tutoring, counseling, and mentorship programs, to address the diverse needs of students from marginalized backgrounds and promote their academic success (Kumar, 2020).

- Outreach and recruitment: Implement targeted outreach and recruitment initiatives to attract students from underrepresented communities, including rural areas, tribal regions, and marginalized urban neighborhoods, ensuring equitable access to higher education opportunities (Singh et al., 2018).

- Campus diversity initiatives: Establish campus diversity committees or task forces comprised of students, faculty, staff, and administrators to develop and implement diversity action plans, foster dialogue, and monitor progress towards creating inclusive campus environments (Mishra & Roy, 2019).

- Research and evaluation: Invest in research and evaluation efforts to assess the effectiveness of diversity and inclusion initiatives, identify areas for improvement, and disseminate best practices to inform evidence-based policymaking and institutional reforms (Narayan & Pritchett, 2019).

By implementing these recommendations, Indian higher education institutions can advance diversity, equity, and inclusion agendas, fostering inclusive excellence and empowering all students to thrive academically and contribute meaningfully to society. However, sustained commitment and collaboration are essential to realize the vision of a truly inclusive and equitable higher education system in India.

Conclusion

Advancing diversity and inclusion agendas within Indian higher education is imperative for fostering inclusive excellence, promoting social justice, and realizing the full potential of every individual. Through a comprehensive examination of the current disparities, the significance of inclusive excellence, empirical evidence supporting interventions, initiatives by leading institutions, challenges, opportunities, and recommendations, it is evident that concerted efforts are needed to create more equitable and inclusive learning environments. While challenges such as socio-economic disparities, cultural biases, and limited access to resources persist, there are also significant opportunities for policy reforms, curriculum innovations, faculty development, student support services, outreach efforts, campus diversity initiatives, and research and evaluation. By implementing these recommendations and

leveraging collective expertise and resources, Indian higher education institutions can make significant strides towards creating a more inclusive and equitable educational ecosystem. Ultimately, the realization of inclusive excellence requires sustained commitment, collaboration, and advocacy from all stakeholders, including policymakers, institutional leaders, faculty, students, and civil society organizations. By working together to dismantle barriers, foster diversity, and promote equity, Indian higher education can fulfill its transformative potential as a driver of social mobility, economic development, and societal progress. Through these collective efforts, we can create a future where every individual has equal opportunities to access and succeed in higher education, regardless of their background or identity.

References and Readings

1. Government of India (2021). National Education Policy 2020, Ministry of Education, Government of India, New Delhi. *https://www.education.gov.in/sites/upload_files/mhrd/files/NEP_Final_English.pdf*

2. Bakshi, A. (2018). Promoting Diversity and Inclusion in the Curriculum: Strategies for Higher Education Institutions, *Journal of Diversity in Higher Education*, 11(3), 210-225.

3. Singh, R., et al. (2019). Faculty Development Programs for Inclusive Teaching Practices: A Systematic Review, *Higher Education Research & Development*, 38(5), 1001-1016.

4. Mishra, S., and Roy, S. (2019). Enhancing Student Support Services for Promoting Diversity and Inclusion in Indian Higher Education, *Indian Journal of Educational Sciences*, 7(2), 56-72.

5. Kumar, A. (2020). Socio-economic Disparities in Indian Higher Education: A Comparative Analysis, *International Journal of Educational Development*, 75, 102157.

6. Desai, P., and Chatterjee, S. (2017). Research and Evaluation in Promoting Diversity and Inclusion: A Systematic Review, *Diversity in Education*, 20(3), 321-335.

7. Narayan, S., and Pritchett, L. (2019). Intersectionality and Inequality in Indian Higher Education: A Qualitative Analysis, *Gender & Society*, 33(4), 547-568.

8. Singh, A., et. al. (2018). Addressing Resource Disparities in Indian Higher Education: Insights from a Qualitative Study, *Journal of Higher Education Policy and Management*, 40(6), 623-639.

9. Bhandari, R., and Desai, S. (2018). Leveraging Technology for Promoting Diversity and Inclusion in Higher Education: A Case Study of Online Learning Platforms, *Computers & Education*, 121, 1-12.

10. TISS (n.d.). Tata Institute of Social Sciences - About us. *https://www.tiss.edu/about-tiss/*

11. JNU (n.d.). Jawaharlal Nehru University - Diversity Initiatives.

12. Chang, M., et al. (2011). Toward a Critical Mass Theory of Inclusive Excellence: Lessons From a Longitudinal Study of Undergraduate Women in Science, Mathematics, and Engineering, *Journal of Higher Education*, 82(1), 26-60.

13. Milem, J., F. (2003). The Educational Benefits of Diversity: Evidence from Multiple Sectors, In M. J. Chang, et al. (Eds.), Compelling Interest: Examining the Evidence on Racial Dynamics in Higher Education (pp. 126-169), Stanford University Press.

14. Aggarwal, M. (2018). Diversity and Inclusion in Indian Higher Education: A Comparative Analysis, *International Journal of Comparative Education and Development*, 20(3), 345-360.

15. Gurin, P., et. al. (2002). Diversity and Higher Education: Theory and Impact on Educational Outcomes, *Harvard Educational Review*, 72(3), 330-367.

16. Hurtado, S., et. al. (2003). Enacting Diverse Learning Environments: Improving the Climate for Racial/Ethnic Diversity in Higher Education, *ASHE-ERIC Higher Education Report*, 30(1), 1-123.

17. Desai, A. (2010). Inclusive Excellence in Indian Higher Education: A Vision for the Future, *Indian Journal of Higher Education*, 4(2), 123-135.

18. Mayhew, M., J., et. al. (2016). Diversity and Student Success: Assessing the Impact of Diversity on Student Outcomes, Routledge.

19. Chatterjee, A. (2019). Inclusive Teaching Practices and Student Engagement: A Qualitative Analysis, *Journal of Diversity in Higher Education,* 12(4), 376-392. *https://doi.org/10.1037/dhe0000141*

20. Sinha, S., et. al. (2017). Outreach Programs for Underprivileged Students: A Case Study of Indian Institutes of Technology, *International Journal of Technology and Engineering Studies*, 4(2), 78-89.

21. Government of India (2023). Higher Education Survey, Ministry of Education, Government of India, New Delhi. ❑

Journey towards Technology-led Transformations

K Sanjay Murthy (IAS), Secretary, Department of Higher Education, Ministry of Education, Government of India delivered the Convocation Address at the 42ⁿᵈ Convocation Ceremony of the Dayalbagh Educational Institute (Deemed-to-be-University) Dayalbagh, Agra on January 20, 2024. He said, "Although the world you are stepping into is fraught with challenges yet is also replete with opportunities. The skills you have honed here, the values you have imbibed, and the knowledge you have acquired are your tools to navigate this complex world. You are equipped not just to succeed in your respective fields but also to lead the way in creating a more just and humane society." Excerpts

I am privileged to be a part of this important juncture in your lives, when you are all set to spread your wings and fly off into the vast unknown future. This is the moment when we, your elders, your institution, your parents jointly express our faith and confidence in you. We let go of our guiding hands so that you can soar unhindered and unfettered. A convocation does not merely bestow an academic degree on you, it is a declaration that you young men and women are ready to take on life as mature, well adjusted adults.

Friends! You are entering the world at a time when it is transforming at an unprecedented speed. There are technology – led transformations which have totally changed the way people connect and communicate with each other, interact with their physical ecosystems, and the kind of work they are required to do. Artificial Intelligence is making inroads into our lives in ways that we are yet to fully comprehend. Developing competency in critically emerging technology is something that has become more than imperative. Globally, as on the G20 platform, or the connect with the Global South we have recognized the need for countries and societies to work together on issues of common concern, find research-based solutions to common problems, map global skill requirements for the upcoming future and empower our youth with relevant competencies.

Nations have committed to sharing of best practices, resources, knowledge and a lot more on these platforms. Yet, at another level there are political upheavals brought on by widespread conflicts in multiple regions of the world that are constantly working to divide the world. Within our own country also, we encounter such contradictions. On one hand we have a lot to feel proud of - being world leaders in our *digital programmes* through which we have empowered crores of our citizens ; our *moon, mars, sun and other space explorations*; our exemplary management of the *COVID Pandemic* not just for ourselves but for many countries of the world through *vaccine maitri*; our *Ujjwala* programme that has brought succour to so many of our rural women; our *Jan Dhan yojana, Ayushman Bharat yojana* and so much more. Yet, we see widespread disparities among people in their access to opportunities and resources; we see conflicts on very meaningless issues like caste, religion, language, regionality.

Making sense of such contradictions, maintaining your wisdom, compassion and equanimity and working to realize your potential in your chosen area may be a very challenging task, but something I am sure each one of you who is coming out of the august institution is fully equipped for. I am sure each one of you has been shaped profoundly by your educational journey through Dayalbagh Educational Institute.

As you commence on your aspirational march across *Amrit Kaal* today, it is an opportune moment to note the remarkable transformation of our educational ecosystem under the National Education Policy of 2020. This revolutionary policy has laid the path for establishing India as a vibrant knowledge society and is preparing every young Indian to face the challenges and opportunities of the 21ˢᵗ century as they lead the country towards *Atmanirbharta*. Within three years of its launch, we have made impressive progress towards establishing the accessible, inclusive, futuristic, flexible, multidisciplinary and quality education rooted in Indianness that NEP–2020 has envisaged. The higher education sector has rejected its rigid, discipline-linked, straight jacket to adopt flexibility with opportunity for lifelong learning. Multidisciplinary programmes, options for multiple entry exit through an Academic Bank of Credit, choice of online programmes, provision of Joint, Dual and Twinning degrees with foreign universities will now make it possible for students to study as

per their convenience and choice and help them nurture their competencies in consonance with global requirements. Students now have the choice to move between skill and academic streams, do their partial study in Indian and foreign institutions, study multiple courses simultaneously, or do their studies in online mode. We have now allowed even foreign universities to set up campuses in the country, so that you can have access to a wider choice of quality institutions in the country. What is more, you also have the choice of learning even complex subjects like Engineering in your mother tongues and taking common entrance exams to various courses in 13 Indian languages. The growing vibrancy of our research and innovation ecosystem and the improving governance structures are evident in the global ranking of our educational institutions that is continuously improving every year. I am confident that all these transformative reforms will define and lead the progress of the country through *Amrit Kaal.* Also, as envisaged by the policy, we are promoting the spirit of *Ek Bharat Shreshtha Bharat* through programmes like *Yuva Sangam, Kashi Tamil Sangamam* and other regular programmes with paired states in which many of you may have participated.

I am very happy to know that DEI has been at the forefront of implementing the reforms proposed by NEP 2020. The DEI Education Policy 1975, envisioned by the Founder Director Revered Dr M B Lal Sahab, embraces the same holistic vision of nurturing the mind, body, and spirit as that of the NEP. I wish to congratulate DEI on the progress it has made in contribution to all the seventeen United Nation's Sustainable Development Goals making a remarkable impact in Quality Education, Good Health, and Well-being.

It is heartening to note DEI's active participation in several key projects under the aegis of the Ministry of Education including the Virtual Labs in collaboration with IIT Delhi, the Enterprise Resource Planning (ERP) with IIT Kanpur, and the creation of software tools with IIT Roorkee. DEI's Quantum and Nano Computing Virtual Centre is pivotal in the development of low-cost synchronization oscillators for standalone communication networks, which aligns with the nation's goal to enhance its technological infrastructure is a commendable sign of progress. These projects showcase DEI's contribution to India's educational and research landscape and reflect a strong synergy with the Ministry's vision for empowering HEI's.

DEI's commitment to nation building, philanthropy and environment consciousness is evident in their endeavour to reach the tribals in Madhya Pradesh and the interiors of Tamil Nadu, the way they have been looking after the well being of the rural people of the surrounding villages through the DEI NSS Free Medical and Rural Assistance Camps and in the deployment of Green and Renewable energy on a large scale in the institution and their initiative to clean and enrich the banks of the river Yamuna. This forward-looking approach resonates with the educational ethos of Dayalbagh, which emphasizes character building along with knowledge acquisition.

Nurtured under an institution like DEI, as you stand on the threshold of a new beginning, you carry with you not just a degree but a legacy. You are the bearers of a vision that sees beyond the confines of classrooms and textbooks. You are the architects of a future that is more equitable, more inclusive, and more attuned to the needs of a diverse society.

Although the world you are stepping into is fraught with challenges yet is also replete with opportunities. The skills you have honed here, the values you have imbibed, and the knowledge you have acquired are your tools to navigate this complex world. You are equipped not just to succeed in your respective fields but also to lead the way in creating a more just and humane society.

As you embark on this journey, remember that education is a lifelong pursuit. The world is your classroom, and every experience is a lesson. Stay curious, stay compassionate, and stay committed to the ideals of equity and inclusivity. As you move ahead, never lose sight of the fact that there are many young people out there who have not been as fortunate as you in life. Youth who have not had your opportunities. These young people need your support, their welfare needs to be a part of your vision and your endeavour in life.

To conclude, I would like to extend my heartfelt congratulations to each one of you. You have made us proud, and we are excited to see the paths you will carve out for yourselves and the heights you will reach. Go forth with courage, with conviction, compassion and with a heart full of hope.

Thank you !

❑

CAMPUS NEWS

Faculty Development Programme on Advanced Practices and Emerging Technologies

A three-day Faculty Development Programme on 'Advanced Practices and Emerging Technologies in the New Era Libraries' was organised by the Knowledge Centre, Christ University from April 09-11, 2025. A total of 55 librarians, research scholars, and library professionals from various institutions, colleges, and universities attended the event. The welcome address was followed by the traditional lamp-lighting ceremony and invocation song by the library team, symbolising the illumination of knowledge. The inauguration session was presided over by Dr. Fr Jose C C, Vice Chancellor, Christ University, Dr. Nagappa B, Head, Department of TCS, Dr. Fr Varghese K J, Director, Library and Chief Finance Officer, Christ University, and Mr. Sree Kumar Nair, University Librarian, Christ University. The Presidential Address was delivered by Dr. Fr Jose C C, Vice Chancellor, CHRIST University. Dr Fr Jose underscored the significance of embracing digital transformations in research and learning. Drawing from his interdisciplinary expertise and leadership experience, he encouraged participants to remain adaptive, innovative, and intellectually curious in navigating the future of libraries. Mr. Sree Kumar Nair, University Librarian, introduced the theme of the event. His remarks highlighted the programme's focus on hands-on learning and its aim to equip participants with the skills to tackle challenges in contemporary library environments.

Dr. Nagappa B, Head, Information Resource Centre, Tata Consultancy Services (TCS), Bangalore, delivered the Keynote Address. Dr. Nagappa's session mapped the technological evolution from mechanisation to personalisation, highlighting the role of libraries in adapting to technological shifts. He emphasised how big data and sentiment analysis could be used ethically in libraries to enhance personalised services. Focusing on AI, quantum computing, and human-machine synergy, he discussed their implications for libraries and the evolving role of librarians as strategic knowledge managers. Dr. Nagappa stressed the importance of combining technological skills with user empathy and analytical thinking to meet the challenges posed by digital fatigue, infrastructure gaps, and resource optimisation.

A special message was shared by Dr. Fr. Varghese K J, Director, Library and Chief Finance Officer, who, through his deeply motivational words, urged participants to approach uncertainties with innovation and to rekindle their passion for librarianship. His message reaffirmed the importance of purpose-driven leadership in the academic ecosystem. The inauguration session concluded with a vote of thanks.

Dr. Jayapriya, Professor, Christ University, explored the role of AI in transforming libraries, emphasising the need for libraries to stay relevant in the digital age. She discussed various AI tools like Connected Papers, Research Rabbit, and Napkin AI, illustrating how they can assist in literature reviews and content creation. She also introduced tools like Google Docs' Voice Typing to promote inclusivity and reduce plagiarism. Dr. Jayapriya encouraged the audience to balance AI's efficiency with ethical considerations, ensuring AI tools serve as collaborators in research rather than replacements for human intelligence.

Dr. Jayakanth, Senior Scientific Officer, Indian Institute of Science, Bangalore, focused on 'Content Management Systems (CMS) and DSpace-CRIS', emphasising their role in transforming libraries into digital ecosystems. He outlined how digital libraries enable global access to knowledge and preserve cultural heritage. DSpace-CRIS was presented as a powerful tool for managing research content and metadata, supporting greater interconnectivity and research visibility. Dr. Jayakanth highlighted benefits such as long-term preservation, metadata harvesting, and integration through APIs, showcasing real-world applications like ePrints@ IISc, and concluded that adopting platforms like DSpace-CRIS helps libraries evolve into vibrant, research-driven environments.

The session by Dr. Akhandanand Shukla, Professor, Department of Library and Information Science, Central University of Tamil Nadu, emphasised the critical role of libraries in NAAC accreditation, focusing on their contribution to quality

enhancement in higher education. He outlined the eligibility criteria and core key indicators for libraries, such as automation, e-resource subscriptions, and usage statistics. Dr. Shukla provided practical advice on documenting evidence for NAAC, emphasising the importance of templates and records. He also discussed how libraries contribute to non-core indicators through workshops, soft skills programs, and cultural events, positioning libraries as active stakeholders in the accreditation process that enhances institutional visibility and quality.

Mr. Sree Kumar Nair, Librarian, Christ University, provided a detailed overview of the Christ University Library system, highlighting its evolution from a modest collection in 1969 to a modern digital library. He introduced the adoption of KOHA in 2009 and the transition to a fully digital service model. Mr. Nair showcased the library's digital infrastructure, including e-books, databases, and tools for plagiarism detection. He discussed operational features like KOHA, Omeka, and CORAL, which support user engagement and resource management. The session concluded with a campus tour, allowing participants to explore the library's facilities and services firsthand.

Dr. Vijay Kumar Verma, Assistant Librarian, IIT, Delhi, highlighted the importance of lifecycle management for electronic resources in modern libraries, emphasising tools like CORAL for evaluating and managing resources. He discussed key considerations in agreements, such as access scope, DRM restrictions, and COUNTER-compliant usage statistics. The session also addressed the challenges of preservation, with initiatives like CLOCKSS and Portico providing some solutions. Dr. Verma emphasised the need for modular, interoperable systems and outlined the obstacles in India, including high costs and a lack of infrastructure. The session also featured a hands-on demonstration of CORAL's Organisation and Resource Modules, showcasing their functionality in electronic resource management.

Dr. Suresh Jange, Librarian, Gulbarga University, explored Karnataka's implementation of the NEP 2020 and its implications for academic libraries. The policy's five pillars—Access, Equity, Quality, Affordability, and Accountability—were discussed, emphasising the need for libraries to support education in regional languages and address the underutilisation of e-resources. Dr. Jange also highlighted the concerns about library budgets, staffing, and the lack of visibility for librarians in NEP implementation. He concluded by stressing the importance of adequate resources, training, and strategic planning to fulfil NEP's goals in library systems.

Dr. Vimal Kumar V, Assistant Librarian, M G University, Kottayam, conducted a practical session on Koha, covering hardware selection, installation procedures, and system configurations for optimal performance. He recommended hardware with at least 16 GB RAM, SSD, and Intel Core i5 for reliability. The session included demonstrations of Koha installation on Linux OS, configuring Google App Passwords, and securing the system with SSL certificates. The session also addressed customizing Koha's interface with JQuery, enabling libraries to manage their digital infrastructure effectively. Dr. Kumar provided valuable insights on managing Koha installations independently.

Dr. Fr John Neelankavil, Librarian, Dharamaram Vidya Kshetram, emphasised the evolving role of libraries, which must transform into vibrant spaces for creativity, research, and reflection. He discussed modern library designs that combine technology with nature, creating flexible zones for various activities, from silent contemplation to digital exploration. Dr. Neelankavil used St. Joseph's College Library, Devagiri, Calicut, as a case study, showing how thoughtful space design can support holistic learning. He concluded by urging libraries to adopt designs that inspire curiosity and engagement, positioning them as central hubs of education and innovation.

The next day started with a session on the National Digital Library of India (NDLI). Dr. B Sutradhar, Librarian, IIT, Kharagpur, provided a comprehensive overview of the NDLI, highlighting its role in supporting the National Education Policy (NEP) 2020. NDLI offers 24/7 access to academic resources in multiple Indian languages, including regional ones like Kannada. He discussed NDLI's resources for students preparing for competitive exams, metadata schema, and robust infrastructure ensuring uninterrupted access. The session also covered NDLI's collaboration with projects like SWAYAM and NPTEL, with future AI and Big Data initiatives to enhance user experiences.

Ms Manali Choudhury Sengupta, Project Officer, NDLI, focused on NDLI Clubs and their

alignment with NEP 2020, emphasising their role in fostering technology-based education. She shared statistics on club proliferation across India, particularly in Maharashtra and Karnataka, and outlined the registration process for clubs. The session underscored the benefits for institutions, including enhanced student engagement and visibility through collaborative events.

Dr. Sridevi R and Dr. Helen K. Joy, Professors, Christ University, delivered a hands-on session on leveraging Artificial Intelligence for data analytics in libraries. The session demonstrated how AI can analyze user data, predict reading patterns, and improve library service efficiency. Participants engaged in practical exercises to explore AI tools that aid in intelligent resource discovery and optimize digital library systems. The session provided actionable insights into how AI can be integrated into library operations to enhance user experience and operational effectiveness.

Dr. S. Kumar Chandar, Professor, Christ University, explored the integration of Open Science principles with Generative AI technologies in libraries. He discussed the transformation of libraries into dynamic, collaborative research hubs through AI technologies like ChatGPT. Dr. Chandar introduced platforms utilising AI for summarisation and prompt engineering and highlighted initiatives like *data.gov.in* and *osf.io*. He emphasised the importance of developing digital library infrastructures and recommended key readings to understand the changing landscape of knowledge access and technological disruption in the field of library science.

Dr. Fr. Biju K, C, Professor, Christ University, presented the potential applications of Augmented Reality (AR) and Virtual Reality (VR) in libraries. He explained VR concepts, including different degrees of freedom in virtual environments, and demonstrated VR devices such as PlayStation VR and Oculus Quest. The session highlighted how AR/VR can enhance user engagement in libraries through immersive experiences. Dr. Fr. Biju also addressed concerns related to user safety and health in VR environments, ensuring a balanced perspective on the technology's opportunities and challenges for library professionals.

The Valedictory Session, led by Dr. Ramesha B., Professor, Bangalore University, thanked speakers, organizers, and participants for the programme's success. Dr Ramesha highlighted the importance of emerging technologies in libraries and encouraged continued engagement with digital transformations. Dr. Ramesha reaffirmed the role of librarians as knowledge custodians and change agents. Mr. Sree Kumar Nair concluded with a Vote of Thanks, followed by participant's feedback and certificate distribution, marking the successful completion of the event.

Workshop on Advances in Biofuels and Bioenergy Research

A six-day Gian Gian-sponsored workshop on 'Advances in Biofuels and Bioenergy Research' is being organized by the Department of Chemical Engineering, National Institute of Technology, Tiruchirappalli from June 16-21, 2025. The students at all levels (B.Tech./MS/M. Sc./M.E./ M. Tech/ PhD) or Faculty from reputed academic institutions and technical institutions, Executives, Bioprocess Engineers, and researchers from government organizations, including R&D laboratories, Pollution Control Board, etc. may participate in the event.

Advances in biofuel research are reshaping the landscape of renewable energy, driven by the need for cleaner, sustainable alternatives to fossil fuels. Recent breakthroughs focus on feedstock innovation, where second-generation (lignocellulosic biomass) and third-generation (microalgae) feedstocks are being developed to bypass the challenges associated with first-generation biofuels, such as food competition and land-use conflicts. Lignocellulosic feedstocks, including agricultural residues and woody biomass, are rich in cellulose and hemicellulose, which are now being more efficiently hydrolyzed through advanced enzymatic pre-treatment techniques. Similarly, algae have garnered attention due to their high lipid content for biodiesel production, fast growth rates, and the ability to thrive in non-arable environments, reducing pressure on agricultural land. In bioconversion processes, significant progress has been made in metabolic engineering and synthetic biology to optimize microbial strains. Researchers are developing genetically engineered microbes, such as engineered yeast and bacteria, that can ferment sugars more efficiently and tolerate higher biofuel concentrations, thereby boosting yields of bioethanol, biobutanol, and biohydrogen. Overall, advances in biofuel research are moving towards

the development of more efficient, sustainable, and economically viable biofuel systems that are critical to the global transition toward renewable energy and the reduction of dependence on fossil fuels. These innovations aim to address technical bottlenecks while aligning with climate goals and energy security strategies. The Modules of the Event are:

Module A

Advances in Anaerobic Digestion Process for Methane and Hydrogen Production, Vaporization of waste for energy production, biological treatment of wastewater and energy production, and Advances in bioethanol/ biofuel production from agricultural wastes.

Module B

Basic principles of Bio electrochemical system, Mechanisms of electron transfer, exoelectrogens, BES components: Anode, Cathode materials, catalysts, membrane, architecture, Electrode development and characterization for bioelectrochemical system for efficient energy production.

For further details, contact Dr. N Samsudeen / Dr. M Matheswaran, Department of Chemical Engineering, National Institute of Technology, Tiruchirappalli, Tamil Nadu, Phone No: 0431-2503119 / 3120, E-mail: *samsudeen@nitt.edu / matheswaran@nitt.edu*. For updates, log on to: *www.nitt.edu*

International Conference on Power Electronics Converters

A four-day International Conference on 'Power Electronics Converters for Transportation and Energy Applications' is being organized by the Indian Institute of Technology Bhubaneswar, Odisha from June 18-21, 2025. The event aims to bring together leading academic scientists, researchers, and industries (including start-ups) to exchange and share their experiences. It also provides the premier multidisciplinary forum for researchers, practitioners, and educators to present and discuss the most recent innovations, trends, and concerns, practical challenges encountered, and the solutions adopted in the field of Emerging Trends and Technology in Power, Electronics Converters in Transportation and Energy Applications. The broad topics of the event are:

- Power Converter Topologies, Components and Devices.
- Power Electronics for Renewable Energy and Storage Systems.
- Electric Mobility and Transportation.
- Electric Drives and Control.
- Power Flow Control and Power Quality.
- Power System Protection.
- High Voltage Applications.

For further details, contact the Coordinator, Indian Institute of Technology Bhubaneswar Jatni, Khordha, Odisha- 752050.

Workshop on Research Methodology and Multivariate Data Analysis

A five-day Workshop on 'Research Methodology and Multivariate Data Analysis' is being organized by the Department of Humanities and Social Sciences, Indian Institute of Technology Tirupati from May 19-23, 2025. The faculty and research scholars from various disciplines, including management, humanities and social sciences, engineering, etc., may participate in the event. The postgraduate students who are interested in learning the basics of research methodology may also participate. The programme has been designed to provide participants with exposure to the fundamentals of the research process, identification of the research problem, literature review, selection of appropriate research design and various other phases of research. The Contents of the event are:

- Overview of Research Process.
- Systematic Literature Review and Bibliometric Analysis.
- Fundamentals of Data Analysis.
- Multivariate Data Analysis Techniques.
- MANOVA.
- Exploratory and Confirmatory Factor Analysis.
- Structural Equation Modeling.
- Cluster Analysis.
- Logistic Regression and Discriminant Analysis.
- Conditional Process Analysis.
- Research Ethics.
- Academic Writing.

For further details, contact the Coordinator, Department of Humanities and Social Sciences, Indian Institute of Technology Tirupati Chindepalle, Yerpedu PO, Tirupati, Andhra Pradesh – 517619, Phone No : 07895910803/ 09526373908, E-mail: *vishnu@iittp.ac.in /vaneet.kashyap@iittp.ac.in.* For updates, log on to: *www.iittp.ac.in*

AIU News

AI Certificate Courses by AIU—EdifyOnline

The Association of Indian Universities (AIU), New Delhi, announced the launch of two new Online Certificate Courses in 'Artificial Intelligence' (AI) in collaboration with EdifyOnline Corp (USA), under the ongoing University Cluster Pilot Study (UCPS) initiative. The courses – 'Chegg AI Fundamentals' and 'Chegg AI Prompt Engineering', are being offered in partnership with Chegg Skills, a renowned US-based education technology company. These offerings are 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 courses aim to equip learners with essential AI competencies, thereby contributing to their global readiness and professional development.

Learners (students) may enrol in one or both of the offered courses by registering through the provided links. Each 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 Prioritize Tasks.
- Enhance Written Communication.
- Develop Prompts for GPT-4, ChatGPT & 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 courses 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.* ❑

The 'University News' Journal may also be subscribed through our website in Just 4 Steps:

Step 1 : Open the URL **www.aiu.ac.in**

Step 2: Click on the Payment Tab available at the top of the Home Page.

Step 3: Select University News Journal.

Step 4: Fill in the requisite details and click Pay Now.

 (Payment may be made by any of the payment Modes (UPI / Debit Card / Credit Card / Net Banking).

For any query regarding subscription, please write to: subsun@aiu.ac.in, publicationsales@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.

THESES OF THE MONTH

AGRICULTURAL & VETERINARY SCIENCES

Agronomy

1. Choudhary, Raghuveer. **Evaluation of Bt Cotton (*Gossypium hirsutum*) based intercropping systems for enhancing productivity and profitability under rainfed condition of Saurashtra Region**. (Dr. P D Vekariya), Department of Agronomy, Junagadh Agricultural University, Junagadh.

Biotechnology

1. Sharma, Monu. **Simulated studies on degradation of azo dyes from textile effluents using mixed microbial culture**. (Dr. Raman Kumar and Dr. Rajeev Vats), Department of Biotechnology, Maharishi Markandeshwar University, Ambala.

2. Zothanzami. **Identification of predictive and prognostic biomarkers of head and neck cancer in Mizo population**. (Dr. N Senthil Kumar), Department of Biotechnology, Mizoram University, Aizawl.

Forestry

1. Jopir, Jyoti. **Assessment of green manuring potential of leguminous weeds of Mizoram**. (Prof.Kalidas Upadhyaya), Department of Forestry, Mizoram University, Aizawl.

2. Ramanan, S Suresh. **Ecological prospecting of genus *Melia* in India**. (Dr. A Arunachalam and Prof. U K Sahoo), Department of Forestry, Mizoram University, Aizawl.

Genetics & Plant Breeding

1. Deshmukh, Smita Sunilrao. **Heterosis combining ability and stability analysis for yield fiber quality traits and sucking pest tolerance in Bt (BGII) cotton (*Gossypium hirsutum* L)**. (Dr. K S Baig), Department of Genetics and Plant Breeding, Vasantrao Naik Marathwada Agricultural University, Parbhani.

Horticulture

1. Tariq. **Response of liming and transplanting dates on productivity of broccoli (*Brassica oleracea* L var *italica* plenck)**. (Dr. Viveka Katoch), Department of Vegetable Science & Floriculture, CSK Himachal Pradesh Krishi Vishvavidyalaya, Palampur.

BIOLOGICAL SCIENCES

Biotechnology

1. Jain, R Sandeep Kumar. **Evaluation of bioactive principles from Garcinia talbotii Raizada for their therapeutic potentials**. (Dr. H M Kumara Swamy), Department of Biotechnology, Kuvempu University, Shankaraghatta.

2. Veghela, Bhaumik Delipkumar. **Structural and functional characterizations of chitinolytic enzymes for conversion of Chitin**. (Dr. Rushikesh Joshi and Dr. K N Rajput), Department of Biotechnology, Gujarat University, Ahmedabad.

Food Science & Nutrition

1. Shah, Bharti Samir. **Critical study of dietary calcium intake and selected factors influencing bone health in perimenopausal and postmenopausal women in Mumbai Hyderabad and Bidar**. (Prof. Jagmeet Madan and Dr. Meeta Singh), Department of Food Science & Nutrition, S.N.D.T. Women's University, Mumbai.

Life Science

1. Chaudhary, Hiralben Kishorbhai. **Assessment of anticancer potentiality of selected mushroom species**. (Dr. Nainesh Modi and Dr. Rakesh Rawal), Department of Botany, Gujarat University, Ahmedabad.

2. Malsawmtluanga, C David. **Identification and quantification of mycotoxins from selected families of Agaricales found in Champhai District, Mizoram, India**. (Dr. J Lalbiaknunga), Department of Botany, Mizoram University, Aizawl.

3. Pallavi, M. **Studies on diversity and phytochemicals of some aquatic macrophytes of Holalkere, Chitradurga District**. (Dr. Parameshwara Naik T), Department of Botany, Kuvempu University, Shankaraghatta.

4. Patel, Binita Vikrambhai. **Studies on the application of PPAR modulators along with chemotherapeutic agents for the prevention of metastatic ovarian cancer**. (Dr. Kaid Johar SR), Department of Life Science, Gujarat University, Ahmedabad.

5. Prashanth Kumar, C S. **Diversity of phytoplankton in rice fields and its effect on plant growth**. (Dr. Parameshwara Naik T), Department of Botany, Kuvempu University, Shankaraghatta.

6. Shah, Heer Rupesh. **Study of notch signaling in triple negative breast cancer**. (Dr. Hemangini Vora), Department of Life Science, Gujarat University, Ahmedabad.

Microbiology

1. Bhatt, Hirenkumar Prafulchandra. **Biodegradation of selected persistent organic pollutants by white rot fungi**. (Dr. BRM Vyas), Department of Microbiology, Saurashtra University, Rajkot.

Zoology

1. Naji, Almutazbellah, Khalid. **Evaluation of antiplasmodial and other biological activity of** *Gmelina arborea* **Roxb**. (Dr. Gaurang Sindhav), Department of Zoology, Gujarat University, Ahmedabad.

2. Pathan, Yusufkhan Nazirkhan. **Population status distribution and nesting ecology of Baya weaver (***Ploceus philippinus***) of Gir Somnath District and Diu Island**. (Dr. Arvindgiri P Goswami), Department of Zoology, Saurashtra University, Rajkot.

EARTH SYSTEM SCIENCES

Environmental Science

1. Jain, Ruchika K. **Assessment of bio available iron toxicity in Indian coal mine dust towards the development of coal workers pneumoconiosis**. (Prof. Anshumali, Dr. Shubhangi Pingle and Dr. Bibhuti Bhusan Mandal), Department of Environmental Science and Engineering, Indian Institute of Technology, Dhanbad.

Geology

1. Arpitha, M. **The hydro-climatic variability and its implication for water management using machine learning techniques**. (Dr. Syed Ashfaq Ahamed), Department of Geoinformatics, Kuvempu University, Shankaraghatta.

ENGINEERING SCIENCES

Chemical Engineering

1. Abhishek Kumar. **Role of polymer electrolytes and biocatalyst for electrochemical reduction of CO_2 to hydrocarbons**. (Dr. Tapas Palai and Dr. Leela Manohar Aeshala), Department of Chemical Engineering, National Institute of Technology, Hamirpur.

Civil Engineering

1. Debasree. **Performance evaluation of concrete and mortar incorporating pond ash as partial replacement of fine aggregate**. (Dr. Kirtikanta Sahoo), Department of Civil Engineering, Kalinga Institute of Industrial Technology, Bhubaneswar.

2. Saikrishnamachayulu, Ippili. **Assessment of reinforced slope stability of soil using multiple regression models**. (Dr. Vasala Madhava Rao and Dr. Balendra Mouli Marrapu), Department of Civil Engineering, GIET University, Gunupur.

3. Srivastava, Akanksha. **Numerical modeling of biogeochemical interactions influencing bioremediation of BTEX in unsaturated zones**. (Prof. Renu V Prof. Sheeja Jagadevan), Department of Civil Engineering, Indian Institute of Technology, Dhanbad.

4. Vishwakarma, Smily. **Hybrid treatment system of sewage using constructed wetland**. (Dr. Dharmendra), Department of Civil Engineering, National Institute of Technology, Hamirpur.

Computer Science & Engineering

1. Bansal, Kulbhushan. **An efficient approach for finding duplicate bugs in open source software**. (Dr. Harish Rohil and Dr. Sunesh Malik), Department of Computer Science & Engineering, Chaudhary Devi Lal University, Sirsa.

2. Dwivedi, Puspendra. **Detection of evolutionary malware using machine learning on large scale data**. (Dr. C S Raghuvahshi), Department of Computer Science & Engineering, Rama University, Kanpur.

3. Hashmi, Hina. **Study of convolutional neural network and its modified versions for object detection from remote sensing data**. (Dr. Rakesh Kumar Dwivedi Dr. Anil Kumar), Department of Computer Applications, Teerthanker Mahaveer University, Moradabad.

4. Nagle, Malti. **Resource allocation framework for cardiac health predictions based on fog and cloud architecture**. (Dr. Prakash Kumar), Department of Computer Science and Engineering, Jaypee Institute of Information Technology, Noida.

5. Ritinder Kaur. **Augmented framework to enhance the detection accuracy of rare classes in intrusion detection systems**. (Prof. Neha Gupta), School of Computer Applications, Manav Rachna International Institute of Research and Studies, Faridabad.

6. Sagiraju, Srinadhraju. **Software cost estimation using evolutionary optimization techniques**. (Dr. Samaresh Mishra and Dr. Suresh Chandra Satapathy), Department of Computer Science & Engineering, Kalinga Institute of Industrial Technology, Bhubaneswar.

7. Saha, Payel. **An approach towards development of Artificial Neural Network (ANN) techniques to detect lupus disease**. (Dr. Rakesh Kr Mandal), Department of Computer Science & Applications, University of North Bengal, Darjeeling.

8. Sahu, Minakshi. **A multi level security framework against malicious activity using wireless sensor network**. (Dr. Nilambar Sethi and Dr. Susanta Kumar Das), Department of Computer Science & Engineering, GIET University, Gunupur.

9. Shetty, Namitha R. **Development of reversible data hiding techniques for digital images**. (Dr. Yogish Naik G R), Department of Computer Science, Kuvempu University, Shankaraghatta.

10. Shukla, Surbhit. **Human pose estimation using advance deep neural network**. (Dr. C S Raghuvahshi), Department of Computer Science & Engineering, Rama University, Kanpur.

Electronics & Communication Engineering

1. Chauhan, Shivani. **Implementation of monolithic tandem solar cells using SCAPS-1D**. (Dr. Rachna Singh), Department of Electronics & Communication Engineering, Jaypee Institute of Information Technology, Noida.

2. Gupta, Tukur. **Area and power modeling of FPGA based generic modular adder architecture using parallel prefix adders**. (Dr. Shamim Akhter and Dr. Gaurav Verma), Department of Electronics & Communication Engineering, Jaypee Institute of Information Technology, Noida.

3. Nagavarapu, Sowmya. **FPGA implementation of neuromorphic processor and molecular docking analysis in bio medical application**. (Dr. Jitendra Kumar and Dr.Pradyut Kumar Biswal), Department of Electronics & Communication Engineering, GIET University, Gunupur.

4. Panda, Shwetapadma. **Design and modeling of a charge plasma tunnel FET with improved current ration and higher sensing performance**. (Dr. Sidhartha Dash), Department of Electronics & Communication Engineering, Siksha O Anusandhan University, Bhubaneswar.

5. Sood, Ankur. **Modelling and analysis of radio over free space optical communication systems**. (Dr. Rahul Kaushik), Department of Electronics & Communication Engineering, Jaypee Institute of Information Technology, Noida.

Mechanical Engineering

1. Chakraborty, Tapas. **Investigation into the feasibility and performance of Jatropha and rice bran oils as EDM dielectric**. (Prof. Amitava Mandal and Dr. Bappa Acherjee), Department of Mechanical Engineering, Indian Institute of Technology, Dhanbad.

MATHEMATICAL SCIENCES

Mathematics

1. Balasani, Srinitha. **Computational treatment and dynamics of heat and mass transfer in micropolar fluid flow**. (Prof. M Sunder Ram and Dr. Md Shamshuddin), Department of Mathematics, Chaitanya (Deemed To Be University), Himayatnagar, Hyderabad.

2. Mangla, Disksha. **Reliability analysis of manufacturing industries under preventive maintenance**. (Dr. Shakuntla Singla), Department of Mathematics, Maharishi Markandeshwar University, Ambala.

3. Nidhi. **Numerical solution of some problems in nanofluids and hybrid nanofluids**. (Prof. Lokendra Kumar), Faculty of Mathematics, Jaypee Institute of Information Technology, Noida.

4. Pal, Gour. **A study on minimal structures in neutrosophic topological spaces**. (Dr. Runu Dhar), Department of Mathematics, Maharaja Bir Bikram University, Agartala.

5. Parveen Kumar. **A study on controllability of functional differential systems**. (Dr. Ramesh Kumar Vats), Department of Mathematics, National Institute of Technology, Hamirpur.

6. Yahia, Fakhraldeen Gamar Khater. **Thermal performance of nano fluid flow due to a stretching surface: A numerical study**. (Prof. M Sunder Ram and Dr. Md Shamshuddin), Department of Mathematics and Statistics, Chaitanya (Deemed To Be University), Himayatnagar, Hyderabad.

Statistics

1. Sardhara, Anjal Sureshbahi. **A statistical review on effects of cyber law in the area of cyber crime in e-business**. (Dr. Kishor H Atkotiya), Department of Statistics, Saurashtra University, Rajkot.

MEDICAL SCIENCES

Ayurveda

1. Borkar, Sunil Shashikant. **A randomized controlled trial to evaluate the effect of Eranda Moola (Root of Ricinus Communis) In the management of dyslipidemia**. (Dr. Suryaprakash Jaiswal), Faculty of Ayurved, Maharashtra University of Health Sciences, Nashik.

2. Patil, Kavita Sachin. **Comparative open label, prospective Phase II, clinical study to evaluate efficacy and safety of tablet rubyclin–polyherbal formulation and Jeevantyadi Yamak in Ekakushtha, WSR to psoriasis**. (Dr. Rajan Kulkarni), Faculty of Ayurved, Maharashtra University of Health Sciences, Nashik.

Biotechnology

1. Dutta, Ankita. **Establishment and evaluation of starvation induced autophagy machinery to ameliorate chemotherapy in human cancer cell line**. (Dr. Anoop Kumar), Department of Biotechnology, University of North Bengal, Darjeeling.

Homeopathy

1. Meghani, Mrugank Narsinhbhai. **Homeopathic management of glaucoma and it's statistical analysis**. (Dr. Achyut C Patel), Department of Homeopathy, Saurashtra University, Rajkot.

Medicine

1. Sharma, Sheetal. **A study to determine sexual dimorphism by assessment of frontal sinus**. (Dr. Jigna Shah), Department of Oral Medicine and Radiology, Gujarat University, Ahmedabad.

Nursing

1. Chavan, Mrunal Prashant. **A quasi – experimental study to assess effectiveness of integrative interventions on motor activity, attention, and academic performance in children with Attention Deficit Hyperactive Disorder (ADHD) from urban community**. (Dr. Jaya Kuruvilla), Faculty of Allied Health Sciences, Maharashtra University of Health Sciences, Nashik.

Optometry

1. Shah, Brinda Haren. **Causes of low vision and its management in children studying in blind school of Gujarat**. (Dr. Dipali Satani), Department of Optometry, Gujarat University, Ahmedabad.

2. Shah, Zalak Anantkumar. **A study of epidemiology characteristics and association of keratoconus patients in Western Indian population**. (Dr. Dipali Satani), Department of Optometry, Gujarat University, Ahmedabad.

Orthopaedics

1. Prasad, Somnath Bhandari. **A study of patterns of avascular necrosis of femoral head in sickle cell Patients in Tribal Belt of Maharashtra**. (Dr. K R Patond), Faculty of Medicine, Maharashtra University of Health Sciences, Nashik.

Pharmaceutical Science

1. Jadhav, Monika Laxman. **Development and evaluation of herbal hepatoprotective antitubercular formulations**. (Prof.Pratima Tatke), Faculty of Science and Technology, S.N.D.T. Women's University, Mumbai.

2. Mennuru, Nagendra Babu. **Rational design synthesis spectral characterization of structural analogs of a selected anti-infective agent as potential therapeutic agents**. (Dr. S V Satyanarayana Dr. D Swarnalatha), Department of Pharmaceutical Science, Jawaharlal Nehru Technological University Anantapur, Ananthapuramu.

3. Menon, Sindhu Anoop. **Development and validation of analytical methods for simultaneous estimation of phytomarkers in polyherbal formulations**. (Prof.Pratima Tatke), Faculty of Science and Technology, S.N.D.T. Women's University, Mumbai.

4. Veerareddy, Vyshali. **Development and validation of analytical and bio analytical methods for the quantification of some selected antiviral drugs and its pharmaceutical dosage forms**. (Prof. Kumaraswamy Gandla), Department of Pharmacy, Chaitanya (Deemed To Be University), Himayatnagar, Hyderabad.

5. Yadav, Mukul. **Scaffold hopping of natural alkaloid and analog focused synthesis towards discovery of anticancer agents**. (Prof. Sankar K Guchhait), Department of Medicinal Chemistry, National Institute of Pharmaceutical Education and Research, Mohali.

Physiotherapy

1. Patel, Kaushikkumar Khalapbahi. **Association of quality of life and glycaemic index with adherence to medication exercise and diabetes related self care activities in type 2 diabetes mellitus patients**. (Dr. Shraddha Diwan), Department of Physiotherapy, Gujarat University, Ahmedabad.

2. Shah, Manali Kamleshbhai. **Effect of specific training program in recreational cyclists**. (Dr. Megha Sheth), Department of Physiotherapy, Gujarat University, Ahmedabad.

PHYSICAL SCIENCES

Biotechnology

1. Gundagatti, Shilpa. **miRNA based electrochemical biosensor for ovarian cancer diagnosis**. (Dr. Sudha Srivastava), Department of Biotechnology, Jaypee Institute of Information Technology, Noida.

2. Srivastava, Samriddh. **Development and characterization of bacterial cellulose based wound healing biomaterial**. (Dr. Garima Mathur), Department of Biotechnology, Jaypee Institute of Information Technology, Noida.

Chemistry

1. Bandi, Sandhya Rani S. **Synthesis and biological evaluation of pyridopyrimidine containing 1, 2, 3-triazoles**. (Prof. S Narsimha), Department of Chemistry, Chaitanya(Deemed To Be University), Himayatnagar, Hyderabad.

2. Kumara, H A Anil. **Preparation of N, O and S-containing heterocycles and their transition metal complexes; Evaluation of their biological activity**. (Dr. G Krishnamurthy), Department of Chemistry, Kuvempu University, Shankaraghatta.

3. Nunach, Amit Kumar. **Green approach towards corrosion inhibition for mild steel in acidic medium by using expired drugs and plant extracts**. (Dr. Gita Rani), Department of Chemistry, Chaudhary Devi Lal University, Sirsa.

4. Saikishore Kumar, B R. **Synthesis characterization and applications of various nano NPK composites for sustainable agriculture**. (Dr. E Jagadeesgh Kumar), Department of Chemistry, Chaitanya (Deemed To Be University), Himayatnagar, Hyderabad.

5. Soni, Palak. **Photocatalytic oxidation of nitrogenous fertilizers using cyclodextrin and reduced graphene oxide modified metal TiO_2 nanocomposites**. (Dr. Bonamali Pal and Dr. Raj Kumar Das), Department of Chemistry & Biochemistry, Thapar Institute of Engineering and Technology, Patiala.

6. Sunil Kumar, J. **Synthesis, characterization and biological screening of some N, O heterocycles**. (Prof.E Jagadeesh Kumar), Department of Chemistry, Chaitanya (Deemed To Be University), Himayatnagar, Hyderabad.

7. Swarnalatha, S. **A new analytical stability indicating method for the development and validation of some pharmaceutical drugs using RP-HPLC and LC-MS**. (Dr. D P Kavitha), Department of Chemistry, Chaitanya (Deemed To Be University), Himayatnagar, Hyderabad.

8. Vasantakumarnaik, N K. **Synthesis characterization and biological evaluation of transition metal complexes containing novel heterocycles**. (Dr. G Krishnamurthy), Department of Chemistry, Kuvempu University, Shankaraghatta.

9. Vinay Kumar, E. **Fabrication of metal oxide and sulphide nanoparticles and their applications**. (Dr. Anitha Dr. B E Kumara Swamy), Department of Chemistry, Kuvempu University, Shankaraghatta.

10. Zahara, Fiza Noor. **Synthesis characterization and applications novel AZO dyes and their metal complexes**. (Dr. J Keshavayya), Department of Chemistry, Kuvempu University, Shankaraghatta.

Physics

1. Donthula, Sumalatha. **Investigation of thermophysical properties of the binary liquid mixtures of aromatic alcohol with different organic solvents at various temperatures**. (Prof. Amireddy Raju), Department of Physics, Chaitanya (Deemed To Be University), Himayatnagar, Hyderabad.

2. Kolavada, Himalay Manibhai. **Ab-initio investigations of two-dimensional layered materials for energy storage applications**. (Dr. Sanjeev K Gupta), Department of Physics, Gujarat University, Ahmedabad.

3. Manisha. **Development and characterization of rate earth doped $BaGd_2O_4$ phosphors for optoelectronic applications**. (Prof. Shailendra Kr Sharma), Department of Physics, Indian Institute of Technology, Dhanbad.

4. Nitika. **First principles investigation of structural electronic and optical properties of two dimensional group III nitride based heterostructures**. (Prof.Dharamvir Singh), Department of Physics, Chaudhary Devi Lal University, Sirsa.

5. Polo, Chiging Lasa. **A study of particle dynamics in the vicinity of black hole**. (Dr. H S Singh), Department of Physics, Rajiv Gandhi University, Itanagar.

6. Satawara, Akshay Mehendrabahi. **Ab-initio investigation on some nanotubes for H_2 Energy economy**. (Dr. P N Gajjar), Department of Physics, Gujarat University, Ahmedabad. ❑

Saraswati Shikshan Sanstha's
SARASWATI COLLEGE OF EDUCATION, KINWAT
(Affiliated to Swami Ramanand Teerth Marathwada University, Nanded)

WANTED
(Non Grant)

Applications are invited from eligible candidates for the following posts completed in all respect, should reach to the office **within 15 days** from the date of publication of this advertisement.

Sr. No.	Designation	Total Post	Reservation
1	Assistant Professor	06 - Regular	Open - 02, ST- 01, VJ(A) - 01, OBC- 01, SEBC - 01

Note:- For Detailed information about post, qualification & Other terms and conditions, please visit the University **Website: www.srtmun.ac.in.**

Address for Correspondence:-
Principal
Saraswati Education Society's
Saraswati College of Education B.Ed.
Mandva Road, Kinwat Tq. Kinwat
Dist. Nanded Pin – 431804, Mobile - 8055198331

President
Saraswati Education Society, Kinwat, Dist. Nanded

Shri Mudhaidevi Shikshan Sanstha's , Deur
Prof. Sambhajirao Kadam College, Deur
At & Post – Deur, Tal- Koregaon, Dist-Satara. 415524 (Maharashtra)
(Affiliated to Shivaji University, Kolhapur)

(Permanently Granted)

WANTED

Applications are invited from eligible candidates for the following post:

Sr. No.	Name of Post	Vacant post	Reservation
1.	Principal	01	Open to All - 01

Note: For detailed information about posts, qualifications and other terms and conditions please visit University **website : www.unishivaji.ac.in.**

Place : Deur
Date : 28/04/2025

Chairman,
Shri Mudhaidevi Shikshan Sanstha,
Deur Tal- Koregaon, Dist – Satara, Pin – 415524

Shri Yashwant Shikshan Prasarak Mandal Kodoli
Vasantidevi Patil Institute of Pharmacy
(M. Pharmacy) Kodoli
Tal :- Panhala, Dist:- Kolhapur (Maharashtra) 416114
(Affiliated to Shivaji University, Kolhapur)
(Non Grant)

WANTED

Applications are invited from eligible candidates for the following posts:

Sr. No.	Name of post	No. of Posts	Reservation
A.	Principal	01	01 – Open to All
B.	Professor :		
1	Pharmaceutics	01	01 – Open to All
2	Quality Assurance	01	01 – Open to All
C.	Associate Professor :		
1	Pharmaceutics	01	01 – Open to All
2	Quality Assurance	01	01 – Open to All
D.	Assistant Professor :		
1	Pharmaceutics	01	01 – Open to All
2	Quality Assurance	01	01 – Open to All

Note : For detailed information about posts, qualifications and other terms and conditions please visit University **website : www.unishivaji.ac.in**

Place : Kodoli
Date : 22/04/2025

Secretary	President

Shri Yashwant Shikshan Prasarak Mandal, Kodoli

हरियाणा केंद्रीय विश्वविद्यालय
CENTRAL UNIVERSITY OF HARYANA
(NAAC Accredited 'A' Grade University)
MAHENDERGARH - 123031 (HARYANA)

EMPLOYMENT NOTICE

Advt. No.: 01/NT/R/2025	Date: 17-04-2025

Online applications are invited from the eligible candidates for appointment of various **Non-Teaching posts.** Online Application Form and other related details are available on the University's Website **www.cuh.ac.in.** Any further information in this regard shall be uploaded on the University's website only. The last date for submission of online application is **20-05-2025 upto 5:00 PM.**

REGISTRAR (I/C)

CENTRAL UNIVERSITY OF HARYANA

हरियाणा केंद्रीय विश्वविद्यालय

CENTRAL UNIVERSITY OF HARYANA

(NAAC Accredited 'A' Grade University)

MAHENDERGARH - 123031 (HARYANA)

EMPLOYMENT NOTICE

Advt. No.: CUH/01/R/T/2025   Date: 16-04-2025

Online applications are invited from the eligible candidates for appointment to various Teaching positions. Online application form, Advertisement and other details are available on the University's Website **www.cuh.ac.in.** Any corrigendum, addendum, etc. will be uploaded on the University's website only. The last date for applying online is **15.05.2025.**

REGISTRAR (I/C)

The Maharashtra Education & Sports Academy's, Chandgad

Mahadevrao B. Ed College, Turkewadi

A/p-Turkewadi, Tal. - Chandgad,
Dist. Kolhapur-416 507 (Maharashtra)
(Affiliated to Shivaji University, Kolhapur)

(Non Grant)

WANTED

Applications are invited from eligible candidates for the following Posts:

Sr. No.	Name of Posts		Total Posts	Open Posts	Reserved Posts
A.	Principal		01	01	-
B.	Assistant Professor				
1.	Perspective in Education		01	-	SC-01
2.	Pedagogy Subject	Mathematics	01	01	-
		Social Science (History Method)	01	01	-
		Languages (Marathi Method)	01	01	-

Note: For detailed information about posts, qualifications and other terms and Conditions, please visit University website: www.unishivaji.ac.in.

Place:-
Date:-

PRESIDENT   **SECRETARY**
The Maharashtra Education & Sports Academy's, Chandgad

SREE NARAYANA MANGALAM TRAINING COLLEGE

(Affiliated to Mahatma Gandhi University, Kottayam)

Moothakunnam P O, North Paravur, Ernakulam District, Kerala – Pin-683516

Mob: 9447729060

WANTED

Applications are invited from fully qualified candidates for the following permanent post:

Post	Number of Post
Librarian (UGC)	1

Age and qualification of the candidates as per University/UGC/Government norms. Application forms for the above mentioned post can be obtained from the undersigned on payment of Rs.1000/- directly or Rs.1050/-by post. Duly filled in application with self attested copies of mark lists and other certificates should reach the Manager **within 30 days** from the date of publication of this advertisement. The appointment will be subject to approval by Government.

Moothakunnam   Sd/-
21-04-2025   **Manager**

MAHARASHTRA SHIKSHAN SAMITI, NILANGA DIST. LATUR (2024-2025)

WANTED

Applications are invited for the post of Principal (Granted) to be filled in Maharashtra Shikshan Samiti's Maharashtra Mahavidyalaya, Nilanga Dist. Latur (MS). Eligible candidates should submit their application along with all necessary documents **within Fifteen days** from the date of publication of the advertisement by Registered post only. This advertisement is published as per NOC Letter – JDHE Nanded/NOC/2024/42 date 25-02-2025.

S. N.	Name of the Post (Designation)	Name of the College	No. of Post	Full Time	Reservation
01	Principal	Maharashtra Mahavidyalaya, Nilanga	01 (One)	Full Time	Unreserved

Educational Qualifications:-
A. Eligibilities:-
1. A Master's Degree with at least 55% marks (or an equivalent grade in a point scale wherever grading system is followed) by a 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, College and other Institutions of Higher Education. **4.** A minimum of 10 research publication in peer reviewed or UGC listed journals. **5.** A minimum of 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 **7.** The vacant post is being filled subject to the decision of Hon'ble High Court, Aurangabad Bench Petition No. 12051/2015.
B. Tenure:- A College Principal shall be appointed for a period of five years, extendable for another term of five years on the basis of performance assessment by a committee appointed by the University, constituted as per these Rules.
Salary & Allowances:- Pay Scales as per the UGC, State Government of Maharashtra & Swami Ramanand Teerth Marathwada University, Nanded Rules from time to time.

NOTE:-
1. Prescribed application form is available on the University **website (www.srtmun.in)** **2.** No T.A./D.A. will be paid to attend the interview. **3.** Eligible Candidates who are already in services should submit their application through proper channel. **4.** All attested Xerox Copies of certificates and other relevant documents should be attached with the application form. **5.** The original certificates must be provided at the time of interview.

Correspondence Address:
The President / Secretary Maharashtra Shikshan Samiti,
Maharashtra Mahavidyalaya, Nilanga
Tq. Nilanga Dist. Latur – 413521 (MS)

President
Maharashtra Shikshan Samiti,
Nilanga Dist. Latur

MALAD KANDIVLI EDUCATION SOCIETY's
M.K.E.S. COLLEGE OF LAW
Accredited by NAAC with 'B' Grade (CGPA – 2.44), ISO 21001:2018 Certified
Bhavishya Bharat Campus, S.V. Road, Malad (W), Mumbai – 400064. Tel. 02228010607 / 91376 74804

MINORITY

APPLICATIONS ARE INVITED FOR THE FOLLOWING POSTS FROM THE ACADEMIC YEAR 2025-2026:

UN-AIDED
LL.B (3 Years) & B. A. LL.B (5 Years)

Sr. No.	Cadre	Subject	Total No. of Posts	Category
1	Principal	-	01	01- OPEN
2	Assistant Professor	Law	10	10- OPEN

The above posts are open to all; however, candidates from any category can apply for the post.

Reservation for women will be as per **University Circular No. BCC/16/74/1998 dated 10th March, 1998. 4% reservation shall be for the persons with disability as per University Circular No. Special Cell/ ICC/2019-20/05 dated 05th July, 2019.**

Candidates having knowledge of Marathi will be preferred.

"Qualification, Pay Scales and other requirements are as prescribed by the UGC Notification dated 18th July, 2018 Government of Maharashtra Resolution No. Misc-2018/C.R.56/18/UNI-1, dated 8th March, 2019 and University Circular No. TAAS/ (CT)/ICD/2018-19/1241, dated 26th March, 2019 and revised from time to time".

The Government Resolution & Circular are available on the website: mu.ac.in.

Applicants who are already employed must send their application through proper channel. Applicants are required to account for breaks, if any, in their academic career.

Application with full details should reach the **TRUSTEE / SECRETARY**, **M.K.E.S. COLLEGE OF LAW, Bhavishya Bharat Campus, S.V. Road, Malad (W), Mumbai-400064 within 15 days** from the date of publication of this advertisement. **This is University approved advertisement.**

Sd/-
TRUSTEE/ SECRETARY

SINGHANIA UNIVERSITY

JOIN OUR TEAM

WE ARE INVITING APPLICATIONS FOR ACADEMIC POSITIONS IN SCHOOL OF LAW & LEGAL STUDIES!

Available Positions

- Professor
- Associate Professor
- Assistant Professor

Last Date to Apply: 10th May, 2025

Eligibility
PhD candidates only

Send your resume
admin-hr@singhaniauniversity.ac.in

9355168800 | https://singhaniauniversity.ac.in/ | Pacheri Bari, Jhunjhunu–333515, Rajasthan

---

Punyashlok Ahilyadevi Holkar Solapur University, Solapur

[Under Maharashtra Public Universities Act, 2016]
Phone No. 0217-2744770 ● Email-registrar@sus.ac.in

NAAC Accredited-2022 'B++' Grade (CGPA 2.96)

Ref.: Advertisement No.:
1) PAHSUS/Estab./TP-1/2024/212, dtd. 24/07/2024
2) PAHSUS/Estab./TP-1/2024/213, dtd. 24/07/2024
3) Extended date for submission of form Notification Ref. No. PAHSUS/Estab./2024/227, dtd. 27/08/2024.
4) Extended date for submission of form Notification Ref. No. PAHSUS/Estab./2024/247, dtd. 02/12/2024.

NOTIFICATION

It is hereby notified to all the concerned that the last date of submission of application forms for the posts of **1) Professor 2) Associate Professor** as advertised vide above referred 1, 2, 3 & 4 is hereby extended up to 05/05/2025 (up to 5.00 p. m.).

All are, therefore, requested to note that the **last date** of submission of form is Monday, **5th May, 2025 (up to 5.00 p.m.).** The recruitment process will be as per the provisions of the Government Resolution dated 28/02/2025. Further details can be downloaded from the University **website sus.ac.in** under the link of Recruitment/Employment Opportunities.

Note: Candidates who have previously submitted applications, need not to apply again, but they can submit the additional documents.

Ref. No. : PAHSUS/Estt./2025/2925
Date : 17 April, 2025

Sd/-
I/c Registrar

GOA COLLEGE OF PHYSIOTHERAPY, NATUROPATHY AND YOGIC SCIENCE
SANKHALI-GOA
(Affiliated to Goa University, Govt.aided Institute)

Applications are invited from Eligible candidates for the following positions of **Assistant Professors on Regular Basis** for the program of Bachelor in Naturopathy and Yogic Science. Applications should be supported with self-attested photocopies of mark sheets from SSC onwards, Birth Certificate, Residence Certificate and other relevant documents should reach the undersigned **within 20 days** from the date of publication of this advertisement. Original documents must be presented at the time of the interview.

Sr. No	Name of the Department	Designation of the Post	No. of post	Essential Qualification	Reservation
1.	**Anatomy**	Assistant Professor	01	M. Sc (Anatomy) / M.D. (Anatomy)/ M.D. (Rachana Sharir)	UR
2.	**Physiology, Biochemistry & Histology**	Assistant Professor	01	M.Sc. (Physiology/Biochemistry)/ M. D(Physiology/Biochemistry)/ M. D (Kriya Sharir)	UR
3.	**Philosophy of Yoga & Naturopathy (Philosophy of Naturopathy, Principals of Yoga, Yoga Philosophy)**	Assistant Professor	01	M.D (Yoga)/M. D(Swasthavritta)	UR
4.	**Pathology & Microbiology**	Assistant Professor	01	M.D (Pathology/Microbiology) M.D (Rog Nidana and Vikruti Vidnyan)	OBC
5.	**Community Medicine (PSM, Forensic Med. Toxicology, First Aid and Emergency Medicine)**	Assistant Professor	01	M.D (Community Medicine)/M. D (Agada Tantra & Vyavahara Ayurveda)	UR
6.	**Energy Medicine (Acupuncture and Accupressure, Chromo and Magento Therapy)**	Assistant Professor	01	BNYS/B.O.T.H	UR

ESSENTIAL QUALIFICATIONS:
1. Good academic record with at least 55% marks (or an equivalent grade in a point scale wherever grading system is followed) at the Master's degree in the relevant subject.

MANDATORY REQUIREMENTS:
In addition to the requirements specified above, the following mandatory requirements shall be applicable:

a) Minimum of 15 years of Residence in Goa.
b) Knowledge of Konkani.
c) Knowledge of Marathi shall be desirable.

It is to be noted that one (01) post out of the total six (06) is reserved for the PwD (Locomotor Disability) category.

Sd/-
CEO
Goa College of Physiotherapy, Naturopathy and Yogic Science, Sankhali-Goa

Run By the Shri Ganesh Shikshan Prasarak Mandal Manduraki's
Affilated with SRTMU Nanded
PU. AHILYADEVI VARISHTH MAHAVIDYALAYA (ART'S COMMERCE & SCIENCE) SANGVI (SU.)
Tq – Ahmedpur Dist-Latur-413515 Maharashtra

WANTED

Applications are invited from the eligible candidates for the following post in (Permanent non grant) the application duly completed in or respect should submit reached on the following address **with in 15 Days.** From the Date of Publication of Advertisement by Registered post only

The candidates of reserve category should submit one copy of application to the Dy. registrar special cell, S.R.T.M.U. Nanded. This Advertisement is Published as per NOC letter JDHE Nanded /2024-25 Dated 24-01-2025:

Sr. No	Name of The Post (Designation)	No. of Post	Reservation
1)	Principal	One (1)	Unreserved

Educational Qualification :

A. Eligibility

1) Master's Degree with a least 55% (or an equivalent grade scale wherever grading system is followed) by recognized university.

2) A Ph.D. degree concerned / allied/ relevant/ disciplines (s) in the institutions concerned with evidence of published work and research guidance.

3) Professor/Associate Professor with a total experience of 15th years of teaching/research/administration in university college other Institutions of higher education.

4) A minimum of 10 research publication in peer reviewed or UGC listed journals.

5) A minimum of 110 research score as per appendix, Table 2 U.G.C regulations 2018

6) Academic Eligibility and other rules regulations as per UGC regulation 18 July, 2018 and government resolutions no. misc. 2018/C.R,56/UNI 1 Date 08 March, 2019.

B. Tenure

College Principal shall be appointed for a period of five years extendable for another terms of five years on the basis of performance assessment by a committee appointed by a university constituted as per these rules. Pay scale as per the UGC, State Government and Swami Ramanand Teerth Marathwada University Rules from time to time.

7th pay scale : Academic Level - 13 A

1. Prescribed Application forms is available on the university **website (www.srtmun.in) 2.** No T.A.D.A will be paid to attend the interview. **3.** Eligible Candidates who are already in service should submit their application through proper channel. **4.** All attested xerox copies of certificate and other relevant document should be attached with the application form. **5.** The vacant post is being filled under the document of honorable High Court/Chhatrapati Sambhajinagar (Aurangabad) Bench Petition No.12051/2015.

Address For Correspondence :
The Secretary,
Shri Ganesh Shikshan Prasarak Mandal, Mandurki's
C/o Pu. Ahilyadevi Varishth Mahavidyalaya (Art's Commerce & Science) Sangvi (Su.) Tq- Ahmedpur, Dist-latur 413515. Maharashtra
Contact : 9422468879,9763830323, 9657149418
Email : ahilyadevicollegesangvi2024@gmail.com

Sd/-
Secretary
Shree Ganesh Shikshan Prasark Mandal Manduraki's

Run By the Shri Ganesh Shikshan Prasarak Mandal Manduraki's

Affilated with SRTMU Nanded

PU. AHILYADEVI VARISHTH MAHAVIDYALAYA (ART'S COMMERCE & SCIENCE) SANGVI (SU.)

Tq – Ahmedpur Dist-Latur-413515 Maharashtra

WANTED

Applications are invited from the eligible candidates for the following , post in Pu. Ahilyadevi Varishth Mahavidyalaya (Arts, Commerce & Science) Sangvi (Su.) Tq. Ahmedpur, Dist. Latur (Permanent Non Grant) run by Shri. Ganesh Shikshan Prasarak Mandal Mandurki's Tq-chakur, Dist- Latur, The application dully completed in all respect should reach on the following address in fifteen days. The candidates of reserved category should submit one copy of application to the Dy. Registrar, Special Cell, S.R.T.M.U. N. Nanded **within 15 days** from the Date of Publication of Advertisement by Hand or by speed post only. This Advertisement is published as per NOC letter JDHE Nanded /2024-25/Dated 24-01-2025.

Sr. No.	Subject	Assistant. Professor	No. of Post	Category
1	English	Assistant Prof.	01	Open-03
2	Marathi	Assistant Prof.	01	SC-01
3	Hindi	Assistant Prof.	01	ST-01
4	Home Science	Assistant Prof.	01	VJ(A)-01
5	Geography	Assistant Prof.	01	OBC-02
6	Physics	Assistant Prof.	01	SEBC-01
7	Chemistry	Assistant Prof.	01	EWS-01
8	Commerce	Assistant Prof.	01	
9	Physical Education	Director of Physical Education	01	
10	Library Science	Librarian	01	
Total	10	10	10	10

As Per Govt. Decision Dt.25 Jan 2024 & Parallel Reservation or Horizontal Reservation

Sr. No	Parallel or Horizontal Reservation	No. of Post
1	Women Candidates	03
2	Sport Candidates	01
Total		04

Educational Qualification for Assistant Professor & Director of Physical Education Eligibility (A or B):

A.

i) A Master degree with 55% marks (on an equivalent grade in point table scale wherever grading system is followed) in concerned/relevant /allied subject from an Indian university or an equivalent degree from an accredited foreign university.

ii) Besides fulfilling the above qualifications, the candidate must have cleared the National Eligibility Test (NET) conducted by the UGC, or the CSIR, or a similar test accredited by

the UGC like SET or Who are or have been awarded a Ph. D degree in accordance with the University Grant Commission (minimum standard the procedure for award of M.Phil./ Ph.D. degree) regulations 2009 or 2016 and their amendments from time to time as the case may be exempted from NET/SET:} provided candidates registered for the Ph.D. programme prior to July, 11, 2009 shall be governed by the provisions of the then existing ordinance/by laws/Regulation of the institutions awarding the degree and such Ph.D. candidates shall be exempted from the requirement of NET/SET for recruitment and appointment of assistant professor or equivalent positions in university/colleges/ institutions subject to the fulfillment of the following condition

a) The Ph.D. degree of the candidate has been awarded in regular mode only;

b) The Ph.D. thesis has been evaluated by at least two examiners;

c) An open Ph.D. viva voce of the candidate has been conducted

d) The candidate has published two research papers from his/her Ph.D. work in out of which at least one is in a refereed journal; and

e) The candidate has presented at least two papers, based on his/her Ph.D. work in conferences/ seminars/sponsored/funded/supported by the UGC/CSIR/ICSSR or any similar agency.

Note:

i) The fulfillment of these conditions is to be certified by registrar or the dean (academic affairs) of the university concerned. ii) NET/SET shall also not be required for such masters programs in disciplines for which NET/SET is not conducted. However, Ph.D. degree shall remain the minimum eligibility for appointment of Assistant Professor in such disciplines. B). The Ph.D. degree has been obtained from a foreign university/institutions with a ranking among top 500 in the world university ranking at any time by one of following.

i) Quacquarelli Snymonds (QS)

ii) The Times Higher Education (THE)

iii) The academic ranking of world universities (ARWE) of the Shanghai Tong University (Shanghai)

Note: The academic score as specified in Appendix II (Table 3A) for universities An appendix II (Table 3 B) for college, shall be considered for short-listing of the candidates for interview only, and the selections shall be based only on the performance in the interview.

Address for correspondence:
The Secretary,
Shri Ganesh Prasarak Mandal, Mandurki′s
C/O Pu. Ahilyadevi Varishth Mahavidyalaya (Art's, Commerce & Science)
Sangvi (Su.) Tq. Ahmedpur Dist. Latur – 413515 Maharashtra.
Contact No: 9422468879/9763830323/9657149418
Email : ahilyadevicollegesangvi2024@gmail.com

Sd/-
Secretary
Shri Ganesh Shikshan Prasarak Mandal Mandurki's

Licensed to post without prepayment under WPP No. U(C)-109/2024-26   **Postal Regd. No. DL (C)-05/1241/2024-26**

UNIVERSITY NEWS 63 (17)   April 28 - May 04, 2025   **Regd. No. RNI-7180/1963**

Published on Monday: 28-04-2025   No. of Page 52 including Covers   Posted at LPC Delhi RMS, Delhi-6 on Tuesday/Wednesday every week

ASSOCIATION OF INDIAN UNIVERSITIES
Advertisement Tariff: UNIVERSITY NEWS JOURNAL
W.E.F. APRIL 01, 2017

A. FOR EDUCATIONAL INSTITUTIONS, GOVT. ORGANIZATIONS, PUBLISHERS, BOOK SELLERS & DISTRIBUTORS

GST RATE OF **5%** IS PAYABLE FOR PUBLICATION OF ALL TYPES OF ADVERTISEMENTS IN ADDITION TO THE PAYABLE CHARGE AS MENTIONED BELOW EFFECTIVE APRIL 01, 2020

Categories of Advertisement	1 Insertion	4 Insertions	8 Insertions	12 Insertions
Full Page	15000	45000	85000	120000
Half Page	8000	28000	50000	68000
Quarter Page	5000	16000	28000	40000
Cover (Inside)	16000	55000	100000	144000
Cover(Back)	20000	65000	120000	165000

MECHANICAL DATA OF JOURNAL
Size of Page   21 cms x 27 cms

PRINT AREA
Full Page   23 cms (Height)   x   16.5 cms (Width)
Half Page   12 cms (Height)   x   16.5 cms (Width)
Quarter Page   11 cms (Height)   x   8 cms (Width)

(Preferable Font Size of the Text – Minimum 10 Point)

The Art Work/CRC IN PDF in High Resolution as per above Print Area (in BLACK & WHITE ONLY) or as an OPEN FILE in MS WORD may be sent positively at E-Mail IDs as shown below. MATTER FOR ADVERTISEMENT MUST REACH SEVEN (07) DAYS IN ADVANCE FROM THE DATE OF PUBLICATION OF A PARTICULAR ISSUE OF UNIVERSITY NEWS, WHICH IS PUBLISHED EVERY MONDAY.

B. TARIFF FOR SPECIAL NATURE OF MATTERS/ITEMS (DOUBLE THE RATES)

Tariff for Suppliers of Computers, Computer Stationery & Peripherals, Scientific and Surgical Instruments, Sports Goods and Others(Not covered in any form of the tariff) will be at double the rates and tariff can be had on request.

ADVERTISEMENT AGENCIES (INS ACCREDITED) ARE ALLOWED 15% DISCOUNT.

Full advance payment must be sent directly to AIU Account using any of the Digital modes (i.e. **AIU Payment Web portal,** NEFT/ RTGS/Net Banking/BHIM/G-Pay/UPI, etc.). The details of AIU Account are available in AIU Website (www.aiu.ac.in). The required data can be provided by mail on request.

For further information write to :-

Publication & Sales Division
Association of Indian Universities
AIU House, 16, Comrade Indrajit Gupta Marg, New Delhi - 110 002
EPABX : 011-23230059 (Extn. 208) DIRECT LINE: 011 23213481
E-mail ID : advtun@aiu.ac.in Website : http://www.aiu.ac.in