

Education in Higher Education Institutions (HEIs) And Sustainability: Integrating Knowledge, Values and Action for A Resilient Future

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Abstract- Higher Education Institutions are no longer just degree-awarding bodies; they are catalysts for sustainable development. With the UN Sustainable Development Goal 4.7 and the NEP 2020 emphasizing sustainability, HEIs must reorient curriculum, campus operations, research and community engagement towards sustainability. This paper explores how HEIs can embed sustainability in education.

Keywords- HEI, Sustainability, NEP 2020, ESD, Industry 5.0, Green Campus, Circular Economy.

I. Introduction

The 21st century is defined by a paradox: unprecedented technological growth and deepening ecological crisis. Climate change, resource depletion, inequality and loss of biodiversity demand a new kind of education. The United Nations Decade of Education for Sustainable Development (2005-2014) and later the Sustainable Development Goals (2015-2030) placed universities at the centre of transformation.

Sustainability is not just an environmental concern. As defined by the Brundtland Commission, it is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It rests on three pillars: Environmental, Social and Economic, often called the triple bottom line. For HEIs, a fourth pillar is critical: Cultural and Ethical sustainability.

Fatima College, founded in 1953 with the motto of empowering women through value-based education, reflects how HEIs in India have historically linked education with social sustainability.

Why HEIs Matter for Sustainability?

HEIs influence society in four ways:

First, they produce human capital. Every year, over 4 crore students graduate in India. Their mindset decides future corporate and policy decisions.

Second, they are living laboratories. A college campus with hostels, mess, transport, waste and energy consumption is like a small city. Greening the campus directly reduces carbon footprint.

Third, they produce knowledge. Research in commerce, management and science can create sustainable business models, green accounting and circular economy solutions.

Fourth, they have moral authority. Society looks up to colleges for value formation.

The Gap: Current Status of Sustainability Education in HEIs*

Despite UGC guidelines for Environmental Studies as a compulsory paper, sustainability education in India remains fragmented.

- It is treated as a theory subject for marks, not as practice.
- Commerce and management curricula still prioritize profit maximization over triple bottom line accounting. Concepts like ESG reporting, carbon accounting, green audit and sustainable supply chain are optional.
- Campus operations are rarely linked to classroom learning. Students learn about waste management in class, but do not practice segregation in hostels.
- There is a lack of interdisciplinary approach. Sustainability is left to environmental science departments alone.

A Framework for Sustainable HEI: The 5-C Model*

To overcome this, HEIs need a holistic model. I propose the 5-C model:

Curriculum (What we teach):

Sustainability must be integrated, not added. NEP 2020 calls for multidisciplinary education. For Commerce, this means:

- Introducing Environmental Accounting, Sustainability Reporting (BRSR Framework by SEBI), Carbon Credit Accounting, and Circular Economy in <http://B.Com> and <http://M.Com>.
- Case studies of sustainable businesses: From local Madurai jasmine farmers using organic practices to global models like Patagonia.
- Project-based learning: Instead of a theoretical assignment on CSR, students should audit the CSR of a local company in Madurai and suggest improvements.

Industry 5.0, the theme of your conference, is human-centric, resilient and sustainable. It aligns perfectly with commerce education. Students must learn that Industry 5.0 is not just about AI and robotics, but about using technology to serve human well-being and planet.

Campus (Where we learn)

The campus should teach. The concept of Green Campus from UGC's SATAT initiative is crucial.

- Energy: Solar panels on Fatima College's Mary Land campus, energy audit by commerce students to calculate payback period.
- Water: Rainwater harvesting, water accounting.
- Waste: Commerce students can create a business model from food waste in hostels - composting, biogas. Fatima's Campus Buzz event can be made zero-waste with cloth bags and no plastic.
- Green accounting: Maintain a Green Ledger for the college, showing savings from sustainable practices.

Community (Whom we serve)

HEIs have extension activities under NSS, NCC, YRC. Sustainability education must extend to community.

- Student-led literacy on waste segregation in villages around Madurai.
- Financial literacy for self-help groups on sustainable livelihoods.
- Adoption of a lake or canal for restoration, linking it to service-learning credits under NEP 2020.

Culture (How we think)

Sustainability needs a value shift from consumerism to responsible consumption. This is where women's colleges like Fatima have a unique role. Education must nurture empathy, ethics and long-term thinking. Traditional practices - like using cloth bags, millet-based diet, repairing over replacing - are inherently sustainable. HEIs must document and revive indigenous knowledge systems.

Competency (What we build)

UNESCO lists 8 key competencies for ESD: Systems thinking, Anticipatory, Normative, Strategic, Collaboration, Critical thinking, Self-awareness and Integrated problem-solving. Assessment in HEIs should test these, not just memory.

Role of Commerce Education in Sustainability

Commerce is often seen as anti-sustainability, focused on profit. In reality, commerce is the engine that can make sustainability profitable.

- Green Accounting: Traditional accounting hides environmental costs. Green accounting internalizes them. Teaching students to prepare a green balance sheet is essential.
- Sustainable Finance: ESG funds in India grew by 30% in last two years. Students must learn ESG analysis.
- Circular Business Models: From product-as-a-service to upcycling. <http://B.Com> students can incubate startups in college incubators that follow circular principles.
- Taxation for Sustainability: GST incentives for green products, carbon tax - areas for research.

Challenges in Implementation

- Faculty training: Many faculty are not trained in sustainability pedagogy. FDPs like the one conducted by Fatima Resource Team are needed.
- Resistance to change: Curriculum change requires university approval, which is slow.
- Funding: Solar installation, waste management systems need initial investment.
- Greenwashing: Campus activities should not be just for photos. They need measurable impact.

Best Practices from Indian HEIs

- IIM Bangalore's sustainability lab
- TERI University's entire curriculum is sustainability-focused
- Stella Maris College, Chennai - zero-waste campus initiative

- Fatima College itself has potential with its long tradition of value education and hostel system to implement sustainable food practices.

Recommendations and Road Ahead

1. UGC should make Sustainability Audit mandatory, similar to Academic Audit.
2. Every department should have at least one core paper on sustainability linked to its discipline.
3. Create a Sustainability Cell with student representatives from all departments, including Commerce.
4. Link all student projects to at least one SDG.
5. Use the Industry 5.0 framework: Human-centric technology, use of AI to track energy consumption in campus, blockchain for transparent supply chain of college canteen.
6. Annual Sustainability Report: Just as colleges publish annual reports, they should publish sustainability reports prepared by commerce students.

Conclusion

Education in HEIs and sustainability are two sides of the same coin. Education without sustainability creates skilled but irresponsible citizens. Sustainability without education remains a slogan. HEIs, especially autonomous women's colleges in Tier-2 cities like Madurai, are uniquely positioned to lead this change because they are close to community and rooted in values.

The goal is not to produce students who know the definition of sustainability, but students who live it. When a <http://B.Com> student chooses to carry a cloth bag, questions a company's greenwashing in an annual report, or calculates the true cost of a product including its carbon cost, education has succeeded.

As we move towards Industry 5.0, let us remember: technology will give us tools, but education will give us wisdom to use those tools sustainably.

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