Editorial

Engineering education is transforming at the foundational level due to the increasing environmental, social, and ethical concerns engineers face today. The most profound and important of these directions over the past decade is the inclusion of sustainability and climate awareness in the curricular structures of programmes. Universities and professional organizations worldwide are revisiting how engineers of the 2 st century are well trained. Teaching technical competence is not sufficient now, as they are to be ready to cope with the complex and interrelated demands of climate change, resource limitation, and sustainable development.

Such a move indicates a broader change in philosophy. Engineering education is shifting from a discipline-based to problem-based education, where students are currently being asked to think not only of engineering as a set of tools and algorithms but as a process to develop socially and environmentally sustainable solutions. Subjects previously discussed only regarding efficiency, performance, and cost now cover life-cycle thinking, environmental impact analysis, and circular economy thinking. Sustainability is no longer the subject of optional courses or specialized domains. However, it is being applied across the curriculum and is transforming as the basic lens through which all design and decision-making takes place has changed.

The value of project-based education is growing, and teams of students are addressing challenges that are a part of the real world, directly applicable to the United Nations Sustainable Development Goals. The engineering students are creating solar-powered irrigation farms, developing low-cost water filters in the rural areas, and testing building materials that they can use. The subject of community and interdisciplinarity projects extends the class day. They allow students to make technical solutions, as well as to see their social and ecological environment.

Accrediting organizations and policy statements in education have begun to incorporate such priorities. For example, the National Education Policy (NEP) 2020 emphasizes multidisciplinary education and sustainability awareness in India. The world increasingly demands that programs display quality in turning out graduates who think ethically and are sensitive to sustainability.

However, the integration of sustainability in engineering learning is not without challenges. Faculty members need to be sufficiently trained to teach these courses. Assessment

approaches need to change to respond to not just technical correctness, but environmental sensitivity as well. Institutes can leverage corporate collaborations to bring functional, real-world perspectives to sustainability issues.

I hope the engineering fraternity will embrace this change successfully

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