The HOPE Framework: Equipping Indian University Students with Green Skills for Employability, Career Growth, and Holistic Well-being in the 21st Century

By Prof (Dr) Shalini Verma
Associate Professor
Jaipuria Institute of Management
Ms Sneh Anand
Asst. Manager (HR), IOCL

ABSTRACT
As the world tackles with the dual challenges of environmental sustainability and employability in a rapidly advancing job market, the need for green skills has surfaced as a fundamental focus for the 21st century. This research paper explores the SAMVAW Foundation's HOPE framework comprising the elements of - Happiness, Optimism, Planet, and Environment - as a transformative model for addressing these challenges, particularly for Indian college and university students.

The HOPE framework distinctively integrates the principles of sustainability and holistic well-being into employability approaches, preparing students for future-ready careers while fostering environmental sensitivity for taking climate actions.

Drawing upon qualitative and quantitative methodologies, the research examines the interconnectedness of green skills, employability, and holistic development. It highlights how the HOPE framework aligns with global Sustainable Development Goals (SDGs), national education policies like NEP 2020, and emerging industry requirements for digital and sustainable practices.

This paper also addresses the role of digital technologies, such as artificial intelligence and big data, in advancing green skills and sustainability education. Recommendations are offered for adopting the HOPE framework into educational curricula, bridging the gap between academic institutions and industry needs.

Aligned with India's commitment to the UN's 17 Sustainable Development Goals (17 SDGs), the study positions the HOPE framework as a scalable and impactful solution for nurturing the next generation of environmentally conscious, employable graduates.

Keywords
Green Skills, HOPE Framework, Sustainability, Employability, Career Growth, Holistic Well-being, Indian Higher Education

Introduction
As the 21st century unfolds against a backdrop of climate insecurity, resource scarcity, and tremendous technological change, the global dialogue on employment and education is rapidly shifting its order of priorities. Green skillsthat enable individuals to contribute to environmental sustainability in both traditional and emerging professionshave emerged as a prime priority for educational institutions, policymakers, and industries alike. These skills not only support environmental responsibility but are increasingly seen as prerequisites for employability and long-term career growth in a swiftly evolving global economy.

In India, the dual challenges of environmental degradation and unemployability among youth converge with particular urgency. The country is home to one of the world's largest youth

populations and faces mounting pressure to transition toward a green economy. The National Education Policy (NEP) 2020 and international commitments to the United Nations Sustainable Development Goals (SDGs) highlight the need to integrate sustainability and well-being into our education system. However, implementation gaps persist, especially in aligning curricula with the skills needed for future-ready employment and sustainable employability.

This paper explores the relevance and application of the HOPE framework - an integrative model developed by the SAMVAW Foundation, built around the four pillars of Happiness, Optimism, Planet, and Environment. The HOPE framework aims to bridge the gap between academic learning and real-world sustainability needs by integrating green skills into holistic, value-driven education. It positions well-being not just as a personal outcome but as an institutional and societal responsibility.

To assess the effectiveness and scalability of the HOPE framework in the Indian higher education context, this study employs a mixed-methods approach. The quantitative component surveyed 448 students across both government and private institutions, covering Tier-I, Tier-II, and Tier-III cities, and spanning four academic streams—engineering, business, humanities, and science. This wide-ranging dataset provides insights into students' awareness, readiness, and aspirations related to green skills and sustainable careers.

The qualitative component includes in-depth interviews with 7 faculty members, 5 university administrators, 3 industry stakeholders, and 4 representatives from non-governmental organisations (NGOs) engaged in sustainability education. Additionally, 3 Focus Group Discussions (FGDs) were conducted with smaller cohorts of students to explore nuanced perspectives and experiences around environmental consciousness and career preparedness.

Through this multidimensional approach, the paper positions the HOPE framework as a scalable and transformative model capable of addressing the intersecting challenges of employability, sustainability, and holistic well-being. It offers insights and recommendations for educators, industry leaders, and policymakers to foster a generation of environmentally conscious and employable graduates.

Objectives of the Study

The study aims to investigate the applicability and impact of the HOPE framework that focuses on the four pillars - Happiness, Optimism, Planet, and Environment - in equipping Indian HEIs (Higher Education Institutions) students with essential green skills for a rapidly evolving, sustainability-driven job market. The specific objectives of the study are:

- To examine how the HOPE framework addresses the interconnected goals of employability, sustainability, and holistic well-being. The study explores how each pillar of the HOPE framework contributes to shaping students of HEIs. As these students are not only career-ready but also environmentally conscious and emotionally resilient.
- To evaluate the alignment of the HOPE framework with global and national policy directives, particularly the United Nations Sustainable Development Goals (SDGs) and India's National Education   Policy   (NEP)   2020
  The research assesses the framework's relevance in advancing education that meets national reform agendas and international sustainability standards.
- To explore the potential for scalability and institutional integration of the HOPE framework within   the   Indian   higher   education   system
  The study seeks to identify practical pathways for integrating the framework into HEIs curricula across diverse disciplines, regions, and institutional types.

- These above three objectives form the foundation for analysing how the HOPE framework can serve as a transformative educational model for nurturing future-ready graduates in India.

Literature Review

Growing awareness of anthropogenic activity's hazardous impact on the natural environment and increasing knowledge about the limits of the earth's biospheric system have led to the recognition of environmental education's importance (Parra, et.al, 2020). Consequently, over the past decade, green skills have emerged as a focal point in both academic discourse and policy frameworks, especially within the context of sustainable development and employability.

According to the International Labour Organization (ILO), green skills encompass the technical knowledge, values, and attitudes needed to support environmentally sustainable economic sectors (ILO, 2019). As industries increasingly adopt cleaner technologies, the demand for such skills is expanding across all sectors, not just those traditionally associated with environmental management.

In the Indian context, various initiatives have acknowledged the importance of sustainability in education. The National Education Policy (NEP) 2020 stresses experiential learning, environmental responsibility, and value-based education (Ministry of Education, 2020). Similarly, the Skill India and Unnat Bharat Abhiyan programmes highlight the need for aligning youth skill development with national sustainability goals (Government of India, 2015; Ministry of Human Resource Development, 2014). However, existing research points to gaps in implementation, limited integration of environmental learning into mainstream curricula, and insufficient industry-academia collaboration in driving sustainable competencies.

Globally, frameworks such as UNESCO's Education for Sustainable Development (ESD) have provided a strong foundation for integrating ecological consciousness into learning. ESD promotes interdisciplinary approaches that equip learners with critical thinking, collaboration, and systems thinking—skills essential for navigating complex environmental and social challenges (UNESCO, 2017).

Studies have also shown that sustainable education efforts are more impactful when they are holistic, incorporating mental and emotional well-being (Ronen & Kerret, 2020, Kerret, et.al, 2014). Emerging literature points to a growing recognition that sustainable mindsets are rooted not just in knowledge acquisition, but in values such as empathy, optimism, and emotional resilience – dimensions often overlooked in conventional educational models (Hermes &Rimanoczy, 2018).

Despite strong theoretical and policy interest, empirical studies on integrating green skills with holistic well-being in Indian higher education remain limited. There is also a lack of scalable, adaptable models that can guide institutions in operationalizing these objectives effectively. The HOPE framework attempts to address this gap by combining environmental literacy with personal growth, career relevance, and digital fluency.

About Samvaw Foundation

The SAMVAW Foundation is a Delhi based non-profit organisation working in area of capacity building and skill development to advance Sustainable Development Goal 3 (holistic well-being), Sustainable Development Goal 4 (quality education), and Sustainable Development Goal 5 (gender equality). It achieves this through programmes designed to promote integrated, sustainable growth among communities across India.

The Foundation's key programmes such as GEM (Grandma Earth Mission) and HOPE embed green skills into education curricula, in alignment with the National Education Policy 2020. Its HOPE programme with 4 pillars - Happiness, Optimism, Planet and Environment - caters to Higher Education sector in India.It is designed to bridge the interconnected goals of holistic well-being, quality education, and gender equality. HOPE focuses on enhancing employability and enabling sustainable career growth by equipping students with the competencies required for a green and inclusive economy.

Conceptual Framework

The HOPE framework, developed by the SAMVAW Foundation, offers a four-pillar model for embedding green skills within a broader value-based and career-oriented educational approach. The framework stands for:

- Happiness – Cultivating emotional well-being and mental resilience in learners
- Optimism – Nurturing a future-focused, solution-oriented mindset
- Planet – Building environmental literacy and stewardship
- Environment – Integrating sustainability into daily life, learning, and livelihood
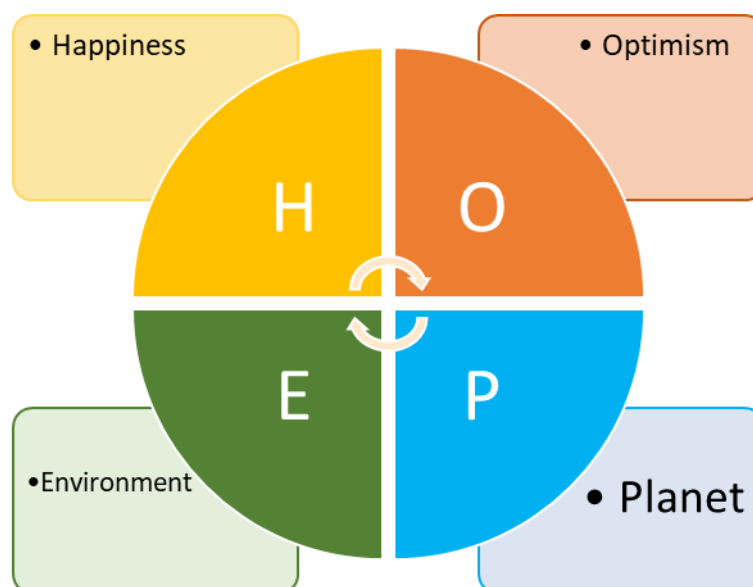

Figure 1: The HOPE Framework of SAMVAW Foundation

Each component of the framework aligns with both global and national objectives:

- Happiness and Optimism connect with India's NEP 2020 emphasis on holistic development and life skills and Decent Work and Economic Growth (SDG 8).
- Planet and Environment directly contribute to SDGs such as Quality Education (SDG 4)and Climate Action (SDG 13).

The framework is designed to be adaptable across disciplines and institutional types, bridging the gap between theoretical knowledge and practical skill sets required in contemporary technology-backed workplaces. It also incorporates the role of digital technologies - including artificial intelligence and big data - as enablers for scaling green skills education.

This paper uses the HOPE framework as the lens to assess current gaps, challenges, and opportunities in Indian universities, with the goal of offering a replicable model that connects employability, sustainability, and well-being in a lucid and evocative manner.

Research Methodology

This study adopts a mixed-methods research design to assess the relevance, applicability, and scalability of the HOPE framework in the Indian higher education context. The methodology integrates both quantitative and qualitative approaches to capture a comprehensive view of student preparedness, institutional readiness, and stakeholder perspectives related to green skills, employability, and holistic well-being.

Research Design

A sequential exploratory design was used:
- Quantitative: to capture trends, perceptions, and behavioural indicators at scale
- Qualitative: to interpret, validate, and contextualise quantitative findings through deeper narrative insights

Quantitative Component

Objective: To analyse student awareness, perception, and readiness for adopting green skills through the HOPE framework
- Sample Size: 448 university students
- Sampling Method: Stratified random sampling
- Strata considered:
  - Type of institution: Government and private universities
  - Geographic spread: Tier-I, Tier-II, and Tier-III cities
  - Academic streams: Engineering, business, humanities, and science
- Data Collection Tool: Structured questionnaire with closed-ended and Likert-scale items
- Mode: Online and offline (as per regional access and preferences)
- Focus Areas:
  - Familiarity with sustainability concepts
  - Relevance of green skills to career aspirations
  - Perceived emotional and academic well-being
  - Openness to holistic learning frameworks like HOPE

Qualitative Component

Objective: To explore institutional and industry perspectives on embedding the HOPE framework in higher education
- **Sample Size and Participant Breakdown:**
  - Faculty members (curriculum experts or sustainability advocates): 7
  - University administrators (deans, placement officers): 5
  - Industry stakeholders (HR professionals, sustainability officers): 3
  - NGO representatives (working in youth or sustainability education): 4
  - Focus Group Discussions (FGDs): 3 FGDs each with 4 students

- **Data Collection Tools:**
  - Semi-structured interviews for key participants
  - Guided discussion templates for FGDs

- **Focus Areas:**
  - Perceived gaps in current curricula
  - Opportunities and challenges in integrating green and emotional skills
  - Institutional willingness to adopt interdisciplinary frameworks
  - Industry expectations for future-ready graduates

Data Analysis
- Quantitative Data: Analysed using descriptive statistics and cross-tabulations; SPSS used for data validation and trend analysis
- Qualitative Data: Thematic coding using manual and digital tools to identify recurring patterns, concerns, and insights

Validity and Reliability
- Instruments were pre-tested on a small sample (20 students and 3 faculty)
- Triangulation used to cross-verify findings across student responses, expert interviews, and FGD data
- Ethical clearance was obtained and informed consent was taken from all participants

This methodology enables the study to offer both generalizable trends and grounded insights, forming a robust foundation for evaluating and recommending the adoption of the HOPE framework in India's higher education ecosystem.

Findings and Discussion
This section presents the key findings from both the quantitative and qualitative components of the study, structured around the four pillars of the HOPE framework - Happiness, Optimism, Planet, and Environment. The results offer insight into the current readiness of Indian higher education institutions and students to integrate green skills into mainstream learning, while also revealing perceptions, challenges, and opportunities across stakeholders.

Student Perspectives on the HOPE Framework (Quantitative Findings)
- **Awareness and Alignment with Green Skills:**
  - 61 per cent of surveyed students were aware of the term 'green skills,' but only 34 per cent had encountered these concepts as part of their curriculum.
  - Engineering and science students demonstrated higher baseline familiarity, while humanities and business students expressed greater interest in learning sustainability through real-world case studies and projects.

- **Career Relevance:**
  - 78 per cent of respondents agreed that green skills would be important for their employability in the next five years.
  - Tier-II and Tier-III city students showed more openness to sustainability-driven career paths when aligned with digital technologies like data science or artificial intelligence.

- **Holistic Development Indicators:**
  - Students associated 'happiness' and 'optimism' with stress management, purpose-driven careers, and collaborative learning environments.
  - 66 per cent felt that their institutions placed limited emphasis on emotional well-being as part of academic development.

Institutional Readiness and Gaps (Qualitative Findings)
- **Faculty and Curriculum Designers:**
  - Faculty respondents acknowledged that while NEP 2020 encourages interdisciplinary and sustainability-based learning, actual implementation remains slow due to rigid curricular structures and limited resources.

> ➢ There was strong support for value-based modules that address not only ecological awareness but also student mental health and personal growth.

- **University Administrators:**
  > ➢ Placement officers and deans recognised the importance of soft and green skills in recruitment but admitted that institutional silos often prevent cross-department collaboration on holistic education models.
  > ➢ Some institutions had begun pilot modules on SDGs or wellness, but these remained optional rather than embedded.

Industry and NGO Feedback

- **Industry Stakeholders:**
  > ➢ All three respondents from the human resources and sustainability departments stressed that employability now depends on adaptability, emotional intelligence, and environmental accountability.
  > ➢ They called for stronger collaboration between academic institutions and corporate partners to co-design experiential learning aligned with industry needs.

- **NGO Perspectives:**
  > ➢ NGOs working on youth education and sustainability highlighted the importance of community engagement in skill development.
  > ➢ They viewed the HOPE framework as a bridge between traditional academic models and the ground realities of environmental stewardship.

Focus Group Discussions (FGDs)

- Across the three FGDs, students expressed a desire for curricula that go beyond theory to offer experiential, project-based learning rooted in local contexts.
- Participants noted that their mental well-being and career anxieties were often treated separately from their academic goals, and welcomed a model like HOPE that integrates these dimensions holistically.

Synthesis of Key Insights

- **Strengths Identified:**
  > ➢ The HOPE framework resonates with student aspirations for meaningful careers and well-being.
  > ➢ There is strong stakeholder recognition of the need to merge sustainability with emotional resilience and employability.

- **Barriers Identified:**
  > ➢ Limited integration of green and holistic skills into core curricula
  > ➢ Absence of faculty training in interdisciplinary, value-based teaching
  > ➢ Institutional compartmentalisation limiting cross-functional efforts

- **Opportunities for Adoption:**
  > ➢ Leverage NEP 2020 mandates for multidisciplinary education
  > ➢ Align with industry expectations through co-designed modules
  > ➢ Use digital tools to scale green and emotional learning content

In summary, the findings validate the relevance of the HOPE framework while highlighting the systemic shifts required for its meaningful integration. The framework offers not just a curriculum

supplement but a strategic model for nurturing future-ready graduates with the competencies to thrive in both professional and environmental futures.

Recommendations

Based on the findings from both quantitative and qualitative components, the following recommendations are proposed for integrating the HOPE framework into curricula of different streams and domains taught in the Indian HEIs:

For Academic Institutions

- **Curriculum Integration:**
  Integrate the four pillars of HOPE - Happiness, Optimism, Planet, and Environment - within credit-based modules across disciplines, ensuring that green skills and well-being are part of mainstream learning rather than peripheral add-ons.
- **Faculty Development:**
  Conduct training programmes for faculty to design and deliver interdisciplinary, experiential courses that blend sustainability, green skills digital skills, and emotional intelligence.
- **Assessment Innovation:**
  Develop non-traditional assessment tools that measure not just academic knowledge but values, problem-solving, and eco-social responsibility.

For Policymakers and Regulators

- **Policy Incentives:**
  Encourage universities to adopt sustainability frameworks through accreditation credits, grants, or recognition schemes aligned with NEP 2020 and UN's SDG targets.
- **Digital Content Repositories:**
  Create open-access content hubs for green skills and holistic learning resources in partnership with NGOs and industry, supporting wide-scale adoption.

For Industry Stakeholders

- **Curriculum Co-design:**
  Collaborate with academic institutions to co-develop courses that reflect real-world sustainability needs and industry standards.
- **Internships and Capstone Projects:**
  Offer structured opportunities for students to apply green skills and well-being practices in live projects within industry or community settings.

For NGOs and Civil Society

- **Community-Based Learning:**
  Facilitate field-based projects, sustainability challenges, or campaigns that connect students with real-world environmental problems and social impact initiatives.
- **Mentoring and Peer Support:**
  Partner with institutions to offer mentorship programmes that promote purpose-driven learning and personal growth among youth.
- By **acting** on these recommendations, stakeholders can collectively enable the HOPE framework to serve as a transformative approach to education—one that nurtures competent, compassionate, and climate-conscious graduates.

Conclusion

The study evaluated the relevance and application of the HOPE framework in bridging the intersecting goals of employability, sustainability in career growth, and holistic well-being among Indian university students. The findings confirm that students increasingly seek value-driven careers that contribute not only to economic success but also to environmental and personal wellness.

Stakeholders across academia, industry, and civil society recognise the growing importance of green skills and emotional resilience, yet systemic barriers continue to prevent their integration into formal education. The HOPE framework offers a structured, flexible, and impactful response to this gap, the one that aligns with India's national educational reforms done through NEP 2020 and global sustainability agendas – UN's 17 Sustainable Development Goals.

To build truly future-ready employable graduates, India must look beyond conventional academic metrics and embrace models that equip students with the knowledge, mindset, skills, and values to thrive in an interdependent world. The time to act is nowand the HOPE framework presents a credible pathway forward.

Role of Technology

Technology plays an essential enabling role in the implementation and scaling of the HOPE framework, particularly in enhancing the delivery, accessibility, and impact of green skill development within Indian HEIs. As the intersection of digital transformation and sustainability continues to deepen, tools such as artificial intelligence (AI), big data analytics, and digital platforms offer innovative ways to make education more adaptive, relevant, and future-ready.

Integration of Artificial Intelligence, Big Data, and Digital Tools

- Artificial intelligence and big data are transforming the way sustainability is taught and practiced. AI-powered learning platforms can personalise educational content based on individual student profiles, promoting engagement and mastery of complex sustainability concepts.

- Big data enables institutions to track environmental behaviours, assess carbon footprints, and identify trends in student learning and well-being, helping refine both curriculum and student support services.

- Digital tools such as virtual labs, gamified apps, and augmented reality (AR) simulations make abstract green concepts more tangible and actionable. For instance, students can simulate the environmental impact of policy decisions, visualise ecosystem dynamics, or participate in global sustainability challenges—deepening their understanding of real-world implications.

Enhancing Green Skill Development Pedagogies

Technology facilitates the delivery of experiential, interdisciplinary, and collaborative learning experiences that are central to the HOPE framework. Online modules, digital storytelling, and open-source sustainability repositories expand access to green education, especially in Tier-II and Tier-III cities where curriculum reform may be slower to implement physically.

Moreover, platforms like Learning Management Systems (LMS) allow educators to embed components of emotional well-being and environmental responsibility into course structures, assessments, and peer discussions.

AI-powered chatbots, reflective journaling apps, and digital mental health tools can complement the Happiness and Optimism dimensions of the HOPE framework, making holistic learning continuous and student-centred.

In the context of employability, digital badges and blockchain-based credentials are increasingly being used to validate green skill competencies, enabling students to showcase their achievements to employers and institutions globally.

Hence, digital technologies are not merely complimentary – they are instrumental in operationalising the HOPE framework at scale. When strategically deployed, these tools can bridge infrastructure gaps, personalise learning, and equip students from HEIs with the skills and values required for holistic well-being – employability, sustainable career growth and meaningful stress-free lives.

References:

1. Government of India. (2015). *Skill India Mission: Empowering Youth for a Sustainable Future*. Ministry of Skill Development and Entrepreneurship.
2. Hermes, J, Rimanoczy, I. (2018). Deep Learning for a Sustainability Mindset. The *International Journal of Management* Education, 16 (3), 460-467.
3. International Labour Organization (ILO). (2019). *Green Jobs and Skills for a Greener Future: A Guide for Policymakers*. International Labour Organization.
4. Kerret, D.; Orkibi, H.; Ronen, T. Green perspective for a hopeful future: Explaining green schools' contribution to environmental subjective well-being. *Rev. Gen. Psychol.* 2014, *18*, 82.
5. Ministry of Education. (2020). *National Education Policy 2020*. Government of India.
6. Ministry of Human Resource Development. (2014). *Unnat Bharat Abhiyan: Empowering Rural India*. Government of India.
7. Parra, G.; Hansmann, R.; Hadjichambis, A.C.; Goldman, D.; Paraskeva-Hadjichambi, D.; Sund, P.; Sund, L.; Gericke, N.; Conti, D. Education for Environmental Citizenship and Education for Sustainability. In *Conceptualizing Environmental Citizenship for 21st Century Education*; Springer: Berlin/Heidelberg, Germany, 2020; pp. 149–160.
8. Ronen, T., Kerret, D. (2020). Promoting Sustainable Wellbeing: Integrating Positive Psychology and Environmental Sustainability in Education. *InternationalJournal of Environmental Research and Public Health*, 17(9).
9. UNESCO. (2017). *Education for Sustainable Development Goals: Learning Objectives*. UNESCO Publishing.