

Paper Presentation

The Centre for Environment Education (CEE) invited researchers, educators, and academics to submit papers for its International Conference on "Education for Sustainability Action." An Abstract Review Committee was established to assess submissions across various sub-themes, all addressing the role of education in tackling the triple planetary crises of climate change, biodiversity loss, and pollution. CEE received approximately 40 abstracts, both national and international.

This session featured impactful research contributions from educators, researchers, professors, and NGOs, addressing critical themes such as sustainability education, climate action, and the role of indigenous knowledge. A selection of these papers were presented during this session, with others focusing on curriculum design and education integration combined into the Green Curriculum Session on Day 2.

Speakers

- Mr Hari Krishnan, Global Climate Change and Ageing Adviser
- Ms Baishali Niyogi, TGT DAV international school, Ahmedabad
- Ms Rashmi Mishra, Education consultant
- Dr Pooja Sahini, Principal Research Scientist and Founder, IITD and Quditbrain India
- Mr Mohammad Asif, Teacher science UPS Munimpur Bartara nindura barabanki, UP
- Ms Palakdeep Kaur, Project Associate, Mobius Foundation
- Dr Bhagyashree Keserwani: Program Associate, Mobius Foundation

Session Highlights

1. Mr Hari Krishnan (Global Climate Change and Ageing Adviser) emphasised integrating older people, especially indigenous elders, into environmental education, promoting intergenerational collaboration, and policy inclusion.
2. Ms Baishali Niyogi (TGT DAV School) discussed gaps in climate change education in K-12 curricula, highlighting hands-on activities as more effective despite lectures being the most common method.
3. Ms Rashmi Mishra (Education Consultant) identified challenges in sustainability education, including superficial implementation, curriculum overload, and a lack of focus on environmental education.
4. Dr Pooja Sahni (IITD and Quditbrain) stressed the importance of incorporating behavioural neuroscience, fostering emotional connections to nature, and immersive experiences in environmental education from an early age.
5. Mohammad Asif (Educator) highlighted the vulnerability of schools and children to climate change, with adaptation measures being implemented to combat related health impacts.
6. Ms Palakdeep Kaur and Dr Bhagyashree Keserwani (Mobius Foundation) showcased the role of global conferences in advancing sustainability education and their catalytic impact on actionable progress.

Conclusion

All speakers made valuable contributions to this session. The expert panellists, Dr Janki Shah, Programme Director for Sustainable Lifestyles and Traditions at CEE, and Ms Madhavi Joshi, SASEANEE Director and Senior Programme Director at CEE, also shared their insightful comments and closing remarks. The final recommendations will be provided by the expert review committee to JESD. The session significantly aided the understanding of integrating environmental education systems.

Key Recommendations from the Session

1. Integration of Indigenous Elders' Wisdom into climate education and action
2. Address gaps in K-12 climate change education with hands-on, experiential, and technology-based learning.
3. Ensure meaningful and prioritised implementation of sustainability education in curricula.
4. Incorporate behavioural and neuroscience approaches to build emotional connections to nature from an early age.
5. Implement adaptation measures in schools to address climate vulnerabilities affecting students.
6. Utilise global conferences to advance sustainability education and advocate for increased funding.

Referred Case Studies

Pooja Sahini: Neuroscience Case Study

Study 1: Cross-sectional

A cross-sectional survey design was employed to explore the relationship between gender, age, environmental education, nature-based experiential learning, connectedness to nature, environmental values, and students' responsiveness to ecological crises. Data was collected using online surveys via Google Forms.

Direct Relationships

- Nature Experience Index to Nature Connectedness: Significant
- Nature Connectedness to Environmental Values: Significant
- Environmental Values to Responsiveness to Nature in Distress: Significant

Indirect Relationships

- Nature Experience Index to Environmental Values: mediated by Nature Connectedness
- Nature Connectedness to Responsiveness to Nature in Distress: mediated by Environmental Values

Hari Krishna Nibanupudi: Examples of elderly Indigenous tribes from around the world highlighting their knowledge and practices.

1. The Inuit in the Arctic
2. The Asháninka in the Amazon Basin
3. Malawi
4. Torres Strait Islands
5. Blackfoot First Nation

These case studies showcase the importance of Indigenous older people's contributions in systematically transferring sustainable, inclusive strategies for climate resilience through cultural practices and oral traditions and transferring the knowledge to future generations.

Baishali Niyogi: Current State of Climate Change Education in the CBSE NCERT Curriculum

This research aims to answer key questions about integrating climate change education in the CBSE NCERT curriculum.

Effectiveness of Teaching Methods:

- Hands-on activities were perceived as highly effective in promoting student understanding and engagement.
- Project-based learning was also rated as highly effective in promoting student understanding and engagement.
- Technology integration was found to be an effective method for enhancing student understanding of complex climate concepts.

Challenges in Implementing Climate Change Education

- Limited Teacher Training
- Time Constraints
- Locally Relevant Materials