

## Smartly Infusing & Expanding Clean & Green Learning Spaces

*Be Clean, Be Green and Make it a Routine – Deepak Gadhia & Deepak Waikar*

Role of a conducive environment for improving teaching and learning has been emphasized and reiterated from time to time. Private Engineering & Technology colleges and institutes have been building appropriate infrastructure to support teaching & learning and upgrading it as and when felt necessary by the compulsions of accreditation, competition and the wishes of the management and owners.

The adverse impact of climate change has been reported worldwide. Pollution has been rising and transition to low carbon has been facing considerable reluctance & resistance at global as well as local levels. National efforts on energy conservation and deployment of renewable energy have been continuing albeit at a snail's pace.

India has embarked on “Swachhh Bharat Abhiyan” since 2014 and recently “Save & Conserve Water campaign” has also been launched. Educational institutes are expected to play a very crucial role in such campaigns. It is envisaged that that role should expand beyond mere campaigns. It is highly recommended to engage students, strengthen research & development and involve faculty, supporting staff management, alumni and community in such endeavours.

Providing optimal clean, green and smart learning space continues to be the aspiration of almost each and every educational institute. However, there are several barriers such as lack of availability of knowhow about the technologies, limited expertise of the people in the institutes, time & budgetary constraints and more.

On the other hand, there are several tangible and intangible benefits of infusing and expanding clean, green and smart learning spaces in colleges, institutes and universities.

There is a potential for bridging that gap by synergising knowledge, experience and expertise of academia and industries. The IUCEE has decided to play a catalytic role in that journey to help transform member

institutions into clean, green and smart learning spaces. As the first step in that direction, the IUCEE will be organising Learning & Development (L&D) programme during the forthcoming International Conference in January 2020.

### L& D Objectives:

At the end of this specially designed highly interactive L&D programme participants should have;

- **Rediscovered** key attributes of Clean & Green Learning Spaces (CGLS)
- **Conceptualised** Innovative ways to internalise and realise CGLS concept.
- **Incorporated** holistic approach to CGLS.
- **Strengthened** collaborations with clean, green technology industries, institutions and professional bodies
- **Learned to leverage** on national critical campaigns & issues, technology development and Personal Experience

### Outline of the L&D Programme

- What is the CGLS Concept?
- What are tangible & intangible benefits of CGLS initiatives?
- What are the challenges in adopting CGLS?
- Case studies in CGLS
  - Muni Seva Ashram
  - Selected campuses in Singapore
- How to involve students, faculty members, management, supporting staff, alumni and community in CGLS initiatives?
- IUCEE Road-map for Accelerating CGLS initiatives and programmes.

### Who can benefit from the programme?

- Anyone interested in Smartly Infusing & Expanding Clean & Green Learning Spaces in their Schools, Colleges, Institutes and Universities for enhancing youth engagement & development, strengthening research & development and widening faculty involvement.

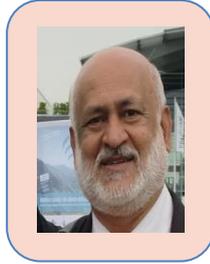
**Date:** 5<sup>th</sup> January 2020 (2 pm to 6 pm)

**Venue:** Anurag Group of Institutions, Hyderabad

**Contact:** [Krishna.Vedula@uml.edu](mailto:Krishna.Vedula@uml.edu)

## L&D Programme Designers & Facilitators:

**Er. Deepak Gadhia** (Chairman of Sunrise CSP, India which is subsidiary of Sunrise CSP Australia) has been a serial entrepreneur including formation of social enterprises. After his return from Germany to India in 1988 he started his company “Gadhia Solar Energy Systems Pvt. Ltd”. India and with technology transfers from German Inventors he successfully commercialized Solar Concentrator technology to India. With the help of HTT GmbH, a leading German Thermal Engineering Company he was instrumental in developing and installing the world’s first Solar Steam Cooking System. His company has installed 100’s of Such systems including the largest in the World, that cooks around 50,000 meals with Solar energy at Shirdi Saibaba Temple. In 2011, after selling shares of his company “Gadhia Solar” he invested in Excellent Renewable, a start-up Biogas company. The company developed one of the first projects in India where 120 households of a village are provided with piped biogas. He was also Chairman of a Joint Venture between Gehrlicher Solar AG of Germany along with GreenForce to offer MW Scale Solar Power Plant based on Photo-voltaic system. After selling his company, Gadhia Solar, he has shifted to Muni Seva Ashram ([www.greenashram.org](http://www.greenashram.org)) a NGO active in the field of Social Care, Health-care, Education and Sustainability and offers his services as a Trustee (Board Member) and looks after Renewable Energy, Sustainability, Education and Skill Development at the Ashram. He completed B.Sc from Mumbai University and Post-Graduation Course in Industrial Manufacturing and Management, Mumbai. He also acquired degree in Process and Environmental Engineering from TFH Berlin, Germany. He worked in various Germany Companies like Wacker Chemie GmbH, DEG Engineering Germany and Denmark for few years. He participated “International Management Training” (IMT) course in Germany of Kuebel Stifting in Germany in 1984. He also completed Post Graduation in “Energy Conservation & Management” course conducted by MIT, USA and T U Berlin in Berlin. After returning to India, he participated in courses conducted by USAID and IREDA (Indian Renewable Energy Development Agency), New Delhi & “Entrepreneurship Development Program” at the Indian Institute of Technology, New Delhi, India. Mr. Gadhia is on various Government and NGO Committee’s and was mentor to start-ups under Global Cleantech Innovation Program funded by UNIDO through



MSME. He was Board Member of SCI, Sacramento and is recipient of many Awards. He travels extensively to give talk and hold workshops on various topics of social Entrepreneurship, Solar Technologies, Biogas, Smart Cities and Sustainability.

**Dr. Deepak L. Waikar** (Associate faculty for the overseas universities in Singapore, Vice Chair of IEEE Education Society Singapore Chapter & Core Committee Member of IUCEE) has been involved in teaching, research & management for almost three decades. He has authored/co-authored book chapters, research articles and policy papers on power, energy, management & education related topics. He has served on various committees in **professional** bodies such as **Chairman** of the Institute of Electrical & Electronic Engineers (IEEE) Power & Energy Society (PES) Chapter, Singapore. He is a recipient of **IEEE-PES Outstanding Power Engineers' Award 2003**. He has delivered invited presentations at the international conferences, seminars and forums. Dr. Waikar is also training adviser for Tacstra Solutions Pte Ltd, Singapore. Dr. Waikar is a Senior Member of IEEE USA and a Life Member of the Institution of Engineers, India with **Ph.D.** from National University of **Singapore**, **M.S.** from University of Saskatchewan, **Canada**, **M.Tech.** from Banaras Hindu University, **India** & PG Advanced Certificate in University Teaching from the University of Newcastle, **Australia**. He obtained PG-DBM from **Nagpur** University & **B.E.** from the **Government Engineering College** in **India**, respectively. His interests include **Sustainable Energy Leadership** Development, **Re-thinking** Teaching, Learning & Academic **Leadership**, Re-inventing & **Transforming** Education, **Innovative Project Design** & Management. (e-mail: [dlwaikar@gmail.com](mailto:dlwaikar@gmail.com)).  
<https://www.linkedin.com/in/dr-deepak-waikar-640a6521/>



## L&D Schedule

Time	Topic	Facilitator(s)
1.5 hours	Concept, Benefits & Challenges in adopting Clean, Green Learning Spaces	Er. Deepak Gadhia (DG) & Dr. Deepak Waikar (DW)
0.5 hrs	Group Discussion	DW
1.5 hrs	Case Studies	DG, DW & Ranji Vaidyanathan
0.5 hrs	IUCEE Road Map	DG, DW & RV