

Design Thinking and Creative Problem Solving for Undergraduate Engineering Education in India: Relevance and Student's Reactions

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Abstract : Facilitating Design Thinking (DT) and Creative Problem Solving (CPS) in engineering education could benefit students by aiding them to think creatively and meaningfully in their education and future profession. A study in the pseudonym of a 'popup class' was conducted for a week at the Indian Institute of Technology, Delhi (IITD) to have an indication for the perceived relevance, benefits and challenges of DT and CPS from the perspective of engineering students in India. 30 third year Bachelor of Technology students from various technical fields participated in the study. They were introduced to the notion of DT and CPS via a mix of theoretical lectures, case discussions and practical workshops. Their reactions were identified on the basis of silent observations made during the course and responses were recorded through a questionnaire, which was filled after the course. All the respondents felt that DT and CPS are relevant to their education. It was perceived by them that there is a subtle improvement in the quality, quantity and approach of solutions to open ended problems. 90% responded positively to the induction of such an exercise in their education and reasoned it by stating that it's important for engineers to know, how to solve open-ended real world problems in a meaningful and innovative way.

Keywords : creative problem solving, design thinking, India, undergraduate engineering education

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