

Invited Talk on
Instructional Design for Scaling and Quality

By

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Abstract of the Talk

All undergraduate programs in engineering in India need redesigning to meet the program outcomes as defined by National Board of Accreditation (NBA) to fulfill the requirements of Washington Accord to which India wishes to become a signatory. The curriculum design of undergraduate programs in computing can be done in the framework of Computing Curricula 2005 as defined jointly by ACM, AIS, AITP and IEEE-CS. Every course in a program is required to meet a subset, selected by instructors, of NBA program outcomes.

At this stage of redesigning curricula and courses to meet the requirements of NBA, it is desirable to rediscover the conventional ideals of higher education, namely, critical and creative reflection and discourse. These can be achieved through following a systematic process for designing a course and large scale adoption of educational technology tools. It is the quality of assessment that determines the quality of learning. It is appropriate adoption of open source tools of educational technology that ensures scaling up with actually improving the quality of learning. The lecture presents a systematic process for designing courses and the experiences in implementing it in Thiagarajar College of Engineering, Madurai.

Profile of the Speaker:

Prof. N.J. Rao obtained his BE degree in Telecommunication Engineering from Andhra University in 1964, MTech in Industrial Electronics from IIT, Bombay in 1966, and PhD in Controls Systems from IIT, Kanpur in 1972. He joined School of Automation of Indian Institute of Science (IISc), Bangalore as Assistant Professor in 1972.

He served as the Chairman of Centre for Electronics Design and Technology (CEDT) for 15 years and as the Chairman of Department of Management Studies for 8 years at IISc. His major areas of research were control systems, system dynamics and engineering education. He facilitated the creation of a unique product oriented graduate program in Electronics Design and Technology, and a MBA program. He coordinated the activities of World Bank project IMPACT, and Ministry of HRD project NPTEL at IISc.

After superannuation in 2006 from IISc, he is a visiting professor at International Institute of Information Technology, Bangalore and works as a consultant on issues related to education. His present research interests include instruction design, intelligent tutoring systems, computer assisted evaluation of student performance, and designing integrated courses to meet the learning outcomes of higher education.

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