

Globalization, Engineering Education and the Public Good

By

V. Narayanamurti

Professor, Harvard University

Foreign Secretary, US National Academy of Engineering

Cambridge, MA

venky@seas.harvard.edu; 617.384.8211

CAETS 2013 Budapest – June 27, 2013

Summary

In this talk I will spend most of my time in addressing three questions:

1. What does it mean to be a **leading and societally relevant** university in an increasingly globalized world?
2. What does it mean to be a broadly educated person in the 21st century?
3. What should **radically innovating** R&D institutions look like?

Abstract

My views are shaped from my own personal experiences in industry, as an engineering dean at Harvard and UCSB and in U.S national laboratories. I will review¹ what is known about the processes of innovation and the role of engineering as a linking discipline with the society at large. It is well known from economic studies that technology plays a central part in development. With the evolution of the Internet and the pervasive use of Information technology, globalization has become a potent force and new multi-national companies and power houses have emerged. The G-8 group of nations has evolved to G-20. Many of the societal grand challenges, such as energy and sustainability, require global solutions. We must therefore prepare engineering graduates for this new environment. I like to say we need to educate “renaissance engineers”- those who understand not only how things work but also how the world works. This necessarily requires a new breed who are able to relate to societal well- being! It also requires new institutional modalities which allow holistic and integrated problem solving and the creation of new institutions which transcend the “basic-applied” dichotomy and encourage entrepreneurial thinking.

Reference

1. See also <https://engineeringedworkshop.seas.harvard.edu>
This site provides a summary of a workshop on reforming engineering education as viewed through the lens of several leading US engineering educators.