Integrating A Systems Model into Global Engineering Education Pedagogy

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Abstract

Global engineering education encompasses learning systems from different parts of the world. In a World system, where we must all work together to get the most out of our educational programs, only a Systems view can facilitate a sustainable outcome. This paper takes a Systems view of the world of engineering education. It recognizes that cultures, traditions, economic system, geographical infrastructure, political system, and so on impinge upon how education is delivered, received, absorbed, retained, and utilized. These factors can vary widely in the global education system. What works in one part of the world may not work in other parts of the world, yet the same learning outcomes are expected from all participants. For this reason, the methodology of this paper is to use the DEJI Model of systems engineering for the pedagogical framework for the Design, Evaluation, Justification, and Integration of engineering education in a global setting. Using this approach ensures that the unique settings and nuances of a particular region is considered in the delivery and sustainment of engineering education.