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Updating Engineering Education in the Southern Cone: Creativity and Innovation

PDF (Size: 47KB) PP. 733-736 DOI: 10.4236/ce.2012.326109

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ABSTRACT

Most of our secondary school graduates have poor skills in mathematics and sciences. This negative handicap makes them refractory to study engineering or science, thus reaching a minimum of aspirants. The innovation we foresee and wish to promote across our countries will undoubtedly require of the alumni, who possess solid bases to design and create products with an important added value, in order to satisfy demands and exceed the expectations in this era, where technology evolves very fast. Creativity awakens the power of our numbed imagination; it is boldness, adventure, discovering and learning from change. To provoke creativity, few things are as important as the time that is dedicated to the cross-pollination with other fields. Many countries are revising the programs of scientific education and the application of new pedagogic paradigms that tend to revert the downward trend of enrollments. We propose a palliative measure, consisting of an introductory course that strives for the training of students in the Stokes diagram, called Pasteur quadrant, seeking to concentrate the scientific task according to the existent knowledge concepts, in the fact that engineering is the motor of innovation, through increasing and consolidating the creative process, teaching them to think and stimulating their critical mind by means of peer teaching.

KEYWORDS

Engineering Education; Teaching for Creativity; Innovation

Cite this paper

Armentano, R. (2012). Updating Engineering Education in the Southern Cone: Creativity and Innovation. *Creative Education*, 3, 733-736. doi: 10.4236/ce.2012.326109.

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