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Testing New Tools for Introducing the Global Dimension in Engineering Education

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Biography of Presenting Author (80 words):

Guido Zolezzi is professor of hydraulics with expertise in river morphodynamics, ecohydraulics, water resources. He directs the Erasmus Mundus Joint Doctorate SMART in River Science and leads the UNESCO Chair in Engineering for Human and Sustainable Development. He has extensive research experience on several river systems worldwide which he integrates with modelling approaches. Guido is interested in innovating technical higher education by integrating the global dimension in engineering curricula at different levels, taking the perspective of international cooperation for development.

Abstract:

Engineers with a broader capacity are needed to contribute to the realization of the SDGs. Though a number of technical universities have recently devoted efforts to integrating sustainable development into engineering curricula, current international debates have not yet explored in detail the role that Higher Education should play within Global Citizenship Education. Here we present lessons learned from a European initiative, the Global Dimension in Engineering Education (GDEE), promoted by a transdisciplinary consortium of technical universities and nongovernmental organisations. GDEE (<http://gdee.eu>) has developed specific novel tools to widen the training of Engineers in Europe, and to include global development aspects into their professional competences. There are increasing needs to further transform learning and training environments and build capacity of educators and trainers on sustainable development issues (Perez-Foguet et al., 2017). The work discusses project-based training and a recently launched honors programme that represent promising tools to set possible ways forward.

Keywords: Global engineering, education, SDGs, Global South.

References

Perez-Foguet, A., Lazzarini, B., Giné, R., Velo, E., Boni, A., Sierra, M., Zolezzi, G., Trimmingham, R. (2017) Promoting sustainable human development in engineering: Assessment of online courses within continuing professional development strategies. *Journal of Cleaner Production*, 172 (2018) 4286-4302