Research profile of academics contributing to Sustainable Development throughout engineering teaching: the case of the ‘Global Dimension in Engineering Education’ community

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Abstract

Higher Educational Institutions play a significant role in promoting a sustainable future. In the last decades, engineering faculties and universities have been increasingly engaged integrating sustainable development in their different functions. Nonetheless, it has been argued that more efforts are required to effectively integrate sustainability principles as a whole-university approach, specifically, in technical universities. Scientific literature highlights the main barriers to the success of those initiatives aimed at addressing this shortcoming. Besides, emerging global trends, such as the growing competition of universities at national and international level, conditioning changes in different academic functions, might be considered as potential barriers for an effective integration of sustainable development in all aspects and activities of universities.

In the last decades, research for sustainable development has been characterised by great efforts aimed at overcoming reductionist thinking and compartmentalisation. Enhancing the understanding of the scientific profile of the academics engaged in activities related to sustainable development can help promoting initiatives aimed at extending further engagement of faculty in all academic functions. For this purpose, the study presents a bibliometric analysis of the scientific production of a community of academics involved in a European initiative aimed at capacitating engineering faculty on sustainable development. Specifically, two groups of academics with different degree of expertise and involvement in sustainable development are compared and characterised, highlighting respectively common trends and similarities of their scientific production. The results point out to different implications on future strategies aimed at engaging specific academic profiles in the field of engineering. Specifically, results highlight Medicine related fields linked with engineering as a potential opportunity of promoting the integration of sustainable development in engineering education. The work concludes recommending further analysis on university rankings and their potential implications on the integration of sustainable development, as well as appropriate policies and mechanisms of faculty rewarding and promotion.
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