eit Manufacturing

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ManuLearn

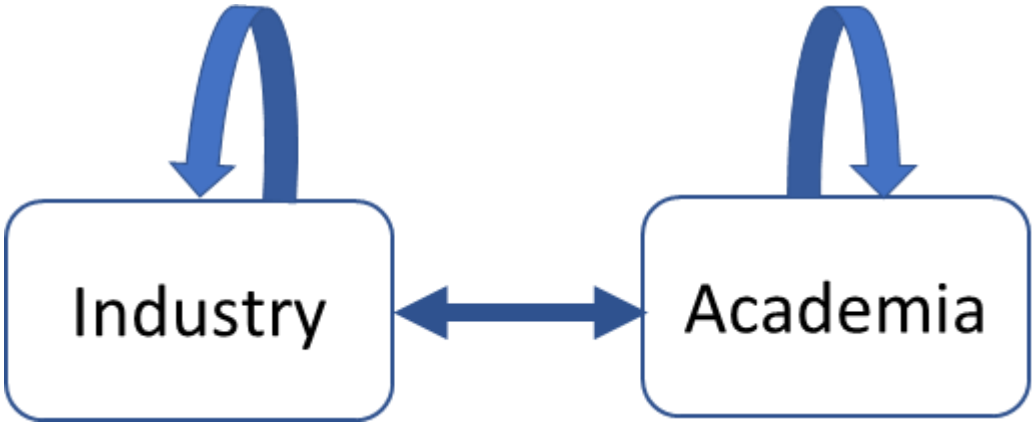
Learning through manufacturing challenges

In current days there is a number of training and learning needs that Industry 4.0 brings about in manufacturing. Current manufacturing educational schema resists to change or adopt any technological innovation, the education time frame is limited and new content cannot be integrated to the standard curricula. At the same time, manufacturing workforce is too ageing, cautious and not up to date about any technological advances.

ManuLearn project aims to answer those needs, offer a methodology of Teaching and Learning practise though manufacturing challenges.

Find out more about the Teaching and Learning factories below.

Photo-credits: IMH Advanced Centre in Manufacturing , Spain



- “Industry-to-classroom” aims at transferring the real manufacturing environment to the classroom. The real-life production site has to be used for teaching purposes in order for the teaching activity to be enhanced with that of knowledge, existing in the processes of every day industrial practice involving one factory, in a simultaneous interaction with one or several classrooms. This interaction can involve discussions, presentations, live videos from the production and other knowledge delivery mechanisms.
- “Academia-to-industry” aims at transferring the knowledge from academia to industry. Test-beds and demonstrators for new technological concepts are installed into academic facilities in order to be validated by students and researchers. This interaction can involve: live videos, audio interactions between company offices and academic lab through an advanced ICT tools. In the lab where live cameras setups are used to show the lab demonstrators, also presentations are provided through a web-conferencing tool, showing details

Teaching factory is a “two-way street” concept where representatives of the industry teach students and at the same time students from the classrooms teach people in manufacturing. This two-way street concept is realized via internet and is a continuous process over a lengthier period of time, with regular sessions and continuous interaction between the factory and the classroom.

Teaching Factory will have the approach of solving an industrial challenge so participants from academy provide ideas and learn about industrial real needs. Companies also improve their scientific-technological absorption capabilities. The knowledge transfer between industry and academy share the same design and process, considering the need of a little adaptation during the implementation. Industry to academy is more “Challenge pull” while academy to industry is more “academy research push”. The academia to industry potential pilot aims at transferring new R&D developments and Technologies, new technological trends and knowledge that merged from previous Research projects that Laboratory for Manufacturing Systems and Automation had participated.

Learning Factory is a part of the Teaching factory concept and will consist of reality-conforming production environments at University facilities that are used as learning environments where students can do hands-on experience with the support of online ICT tools (video conferences, online lectures, chatrooms etc.)

Find out more on the ManuLearn website

Find out more about EIT Manufacturing

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