Transforming Educational Programmes For Future Industry 4.0 Capabilities - TEFFIC

This project addresses skills mismatches (the discrepancy between workers' skills and labour market needs) that is a common problem in a whole EU being widely addressed by European Commission in their communication on a New Skills Agenda for Europe.

Stichworte
Europa, Industrie 4.0

Beschreibung
They recognise that 40% of European employers have difficulty finding people with the skills they need to grow and innovate. Education providers on the one hand and employers and learners on the other have different perceptions of how well-prepared graduates are for the labour market. Moreover, the digital transformation of the economy is re-shaping the way people work and do business. Many sectors are undergoing rapid technological change and digital skills are needed for all jobs that Commission have addressed with help of Grand Coalition for Digital Jobs, EU e-skills Strategy and Digital Skills and Jobs Coalition. The demand for digital technology professionals has grown by 4% annually in the last ten years.

In order to better understand skills mismatch, the European Centre for the Development of Vocational Training (Cedefop) carried out in 2014 the first pan-European skills survey, the initial results of which were published in October 2015. Results revealed that about 30% of European employees possess qualifications that are not well-matched to those required by their jobs. A recent in-depth analysis on Digital Skills in the EU Labour Market conducted by the European Parliamentary Research Service stated that in the near future, 90% of jobs (especially engineering, medicine, art and architecture) will require some level of digital skills.Despite continued strong employment growth, the number of unfilled vacancies for ICT professionals is expected to almost double to 756,000 by 2020. Finally, interdisciplinary profiles - people with the ability to combine work across different fields - are increasingly valued by employers but are in short supply on the labour market. This current development is often referred to as the fourth industrial revolution (Industry 4.0). The term Industry 4.0 refers to a general emerging trend within the European industry (which will be the understanding of the term in this application), although the term originally was introduced as a response to the German situation. If the European industry is to remain competitive, there will be a demand for highly skilled labour at various levels in the transformation towards Industry 4.0 across Europe. Europe needs digitally smart competitive, there will be a demand for highly skilled labour at various levels in the transformation towards Industry 4.0 across Europe.

In order to respond to the German situation, if the European industry is to remain competitive, there will be a demand for highly skilled labour at various levels in the transformation towards Industry 4.0 across Europe. Europe needs digitally smart competitive, there will be a demand for highly skilled labour at various levels in the transformation towards Industry 4.0 across Europe. Without it Europe will not succeed in embracing this digital transformation. The acquisition of new skills is vital to keep pace with the technological developments and industry is already introducing innovative training. One of the main initiatives ‘An industrial policy for the globalisation era’, focus on improving industry (business) by smart and innovative use of knowledge and technologies which will require new high-quality skills, handling and exploiting the new possibilities.

The implementation of Industry 4.0 fundamental changes the prerequisites for future industrial production on a larger scale leading to a new situation. However,
traditionally educational activities are solely focusing on the individual domains within the technologies driving the changes. But the implementation of Industry 4.0 will also affect how the different groups of engineers and technicians should act and collaborate, and eventually how they should perceive the future industrial production to innovate. Future engineers and technicians must accordingly adopt a new understanding of the situation. Furthermore, many educational activities are taking place within isolated technical disciplines/domains, lacking the cross-disciplinary approach and understanding embedded in Industry 4.0. Accordingly, there is a need to strengthen and develop new activities ensuring the needed competences across domains. It is therefore of vital importance that the latest research within this area outputs back into the educational activities as this fundamental change the prerequisites for future industrial production, changing the needs from the industry. Accordingly, there is a necessity to update the content of the existent curriculum to the labour market and societal needs and develop high quality skills and competencies to address future demands from industry. This must be done with significant contribution to innovation in education institutions and application of latest research and newest interdisciplinary and cross border approaches and methods to ensure transferability potential not only between the sectors and disciplines but countries as well.