Learning-factory-based University-Industry Collaboration to Overcome the Challenges Caused by the COVID-19 Pandemic

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Abstract

Purpose of the article The Purpose of the article is to analyse a university-industry collaboration model elaborated as a result of research conducted in Riga Technical University during the COVID-19 pandemic (2020-2021).

Methodology/methods Aanalysis of ten case studies on successful university-industry collaboration in Europe to highlight the key elements for generalizing and updating the model elaborated by the authors before the pandemic.

Scientific aim Scientific aim is to explore opportunities for sustaining and promoting university-industry collaboration in crisis and post-crisis periods overcoming the challenges caused and using digital means in different spheres of life.

Findings The case study analysis revealed that learning factory could be a crucial engine of university-industry collaboration in the digital transformation reality. Different types of learning factories have been launched depending on the level of their concentration on virtual reality, augmented reality, expertise allocation throughout levels and specialties, application of digital approaches as well as learning administration methods, correspondingly. Learning factory design elements based on the case study analysis were concluded to be Human components (teachers, faculty members, evaluation and control group), Technological and environmental setting components for learning (technology, realistic context of learning, virtual context of learning and physical context of learning) and Control and evaluation components (industry involvement and cross functional involvement).

Conclusions Learning factory is equally advatageous for all the stakeholders of university-industry collaboration. However, it plays specifically crucial role for the main players – students who should receive appropriate amount of support and instruction throughout the entire learning factory operations to turn their valuable ideas into genuine products or services. The limitation of this study is conditioned by its nature, that is case study analysis which has theoretically logical nature from the researchers' perspective. A further research is needed to test and study the learning-factory-based model in practice.

Keywords: University-industry collaboration, Learning factory, COVID-19 pandemic

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