Guest editorial

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Transition to Industry 4.0 has initiated the systemic changes in the modern economy, which influenced all spheres of the national economies. However, deeper transformation processes take place in the sphere of education, as it performs the key – infrastructural – function, which is connected to training of digital personnel. The most important difference of digital personnel from skilled specialists that graduated from universities before the transition to Industry 4.0 is that digital personnel must possess applied competencies that allow them to use traditional and breakthrough digital technologies.

This difference predetermines the essential impossibility of foundation on obsolete educational standards and educational methods and technologies, as they cannot be applied for training of digital personnel for Industry 4.0. That is why an important problem of the modern economic science is development of a concept of modernization of the educational sphere, which would allow for training of digital personnel in the conditions of Industry 4.0. Favorable opportunities are created for this – breakthrough digital technologies could change the modern education, turning it into hi-tech education (EdTech).

Thus, the market of educational services contains innovations based on breakthrough digital technologies of Industry 4.0. The most vivid tendency of digital modernization of education is popularization of remote education. A new – remote – form of obtaining educational services is the vector of growth and development of the global market of educational services. Remote education stimulates practical implementation of life-long learning and allows mastering the necessary (e.g. digital), competencies by all interested people any time anywhere.

At the same time, remote education requires legal regulation –to ensure its high quality. Digital personnel, regardless of the form of education, require legal protection. Increase of authomatization – up to full elimination of human from the production process – will cause a risk of aggravation of the problem of unemployment in the near future. That is why it is important to pay attention to conclusion of labor agreements, which guarantee the employment of digital personnel in the long-term.

A new form of educational services – AI teaching – could appear in the near future. It is being actively developed in the most progressive countries of the world. However, AI will not be universal – it will need to be adapted to each economic process. This will allow diversifying the educational services, thus increasing sustainability of development of universities in the conditions of Industry 4.0.

The new horizons of development of education in the conditions of Industry 4.0 and the related problems of management and legal regulation of this process are reflected in this special issue.

All scholars and representatives of non-academic circles – managers and employees of companies, jurisprudents, and government officers – will be able to find in this special issue answers to the questions regarding training of digital personnel, digital modernization of universities and diversification of educational services in the conditions of Industry 4.0. It is expected that this special issue will start a scientific discussion on the issue of digital modernization of the system of education in Industry 4.0 and will become the basis for a search for the optimal solution to this problem.

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