

Uvajanje tehnologij industrije 4.0 in organizacijske spremembe

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Raziskovalno vprašanje (RV): Kakšen je vpliv uvajanja sodobnih tehnologij industrije 4.0 na organizacijske spremembe?

Namen: V članku raziskujemo organizacijske spremembe, ki jih povzroči uvedba oziroma sprejetje sodobnih tehnologij industrije 4.0 v organizacijo.

Metoda: Članek temelji na sistematičnem pregledu strokovne literature. Omejili smo se na obdobje zadnjih desetih let, ki je zaznamovano z obdobjem uvajanja industrije 4.0, ter uporabili baze podatkov Springer Link, Science Direct, Taylor & Francis, Emerald in Scopus.

Rezultati: Iz izidov raziskave je razvidno, da se v organizacijah v procesu uvajanja tehnologij industrije 4.0 srečujejo predvsem z organizacijskimi spremembami na področju človeških virov, zaposlenih in organizacijske kulture. Uvedba tehnologij industrije 4.0 vpliva na spremembe delovnih mest v organizaciji, kar pomeni, da višja stopnja uporabe sodobnih tehnologij predstavlja večjo potrebo po bolj kvalificiranih sodelavcih.

Organizacija: Raziskava podaja značilnosti uvajanja sodobnih tehnologij industrije 4.0 v povezavi z organizacijskimi spremembami. Poudarja povezanost sprejemanja sodobnih tehnologij industrije 4.0 in organizacijskih sprememb, do katerih prihaja ter pomembnost združevanja obeh pojmov.

Družba: Uvajanje sodobnih tehnologij industrije 4.0 je področje, ki ga največkrat povezujemo z višjo produktivnostjo, konkurenčnostjo in modernizacijo procesov v posameznih organizacijah. V izidih te raziskave predstavimo, kako uvajanje sodobnih tehnologij vpliva na

organizacijske spremembe, in prikažemo pomembnost povezovanja in sočasnega sprejemanja sodobnih tehnologij v povezavi z organizacijskimi spremembami.

Originalnost: Izidi raziskave podajajo nov vpogled na področju uvajanja sodobnih tehnologij industrije 4.0 v povezavi z organizacijskimi spremembami. Organizacijski vidik pri raziskovanju uvajanja tehnologij je pogosto spregledan, zato v raziskavi predstavljamo nov vidik povezanosti tehnologij in organizacijskih sprememb.

Omejitve/nadaljnje raziskovanje: Omejitve raziskave se navezujejo predvsem na število izbranih znanstvenih prispevkov v zadnjih desetih letih. Kot predlog nadaljnjih raziskav bi bilo smiselno izvesti obširnejšo empirično raziskavo na podlagi vprašalnika, ki bi dala bolj natančen vpogled v področje organizacijskih sprememb, ki jih povzroča uvajanje sodobnih tehnologij industrije 4.0.

Ključne besede: industrija 4.0, menedžment, organizacija, sodobne tehnologije, spremembe.

Ingrid Franko Uhernik, magistra medkulturnega menedžmenta je leta 2010 zaključila Visoko strokovno šolo na Fakulteti za logistiko Univerze v Mariboru in je leta 2013 magistrirala na Fakulteti za uporabne družbene študije v Novi Gorici. Zaposlena je v Krki, tovarni zdravil d.d. Novo mesto, kjer opravlja delo strokovne sodelavke na področju službe tehnične nabave. Od januarja 2019, ko je bila izvoljena v naziv predavateljice za predmetno področje » logistika in trajnostni razvoj« pa opravlja tudi delo predavateljice na AREMI, Visoki šoli za regionalni menedžment v Rogaški Slatini, FINI, Fakulteti za industrijski inženiring v Novem mestu in FIŠ, Fakulteti za informacijske študije v Novem mestu.

Mirko Markič je doktoriral na Fakulteti za organizacijske vede Univerze v Mariboru s področja organizacijskih ved na temo inoviranja. Po dvanajstih letih delovanja v avtomobilski industriji se je zaposlil na Fakulteti za menedžment Univerze na Primorskem. Je redni profesor za področje menedžmenta in znanstveni svetnik ter vodja ali član 17 raziskovalnih projektov in projektov z gospodarstvom. Njegova bibliografija obsega več kot 690 enot s področja upravnih in organizacijskih ved ter javnega zdravstva (varstvo pri delu).

Aleksander Janeš je izredni profesor managementa ter izkušen strokovnjak in raziskovalec v vlogi programskega direktorja magistrskega študija Management in član projektne skupine DigiCross. Njegove raziskovalne izkušnje in interesi vključujejo različne vidike sistemov projektnega vodenja (sodeloval je pri več kot 35 strokovnih in znanstvenih projektih) in sistemov merjenja poslovanja, (zelenih, modrih, trajnostnih) poslovnih modelov in managementa poslovnih procesov ter orodij upravljanja na področju digitalizacije, inkluzivnega izobraževanja in veščin ter mladih in medijev.

Introduction of Industry 4.0 Technologies and Organizational Changes

Research Question (RQ): How does the introduction of modern Industry 4.0 technologies affect organizational changes?

Purpose: The article investigates organizational changes caused by the introduction/adoption of modern Industry 4.0 technologies in an organization.

Method: The article is based on a systematic review of scientific literature. It is focused on the period of the last ten years, which is marked by the introduction of Industry 4.0, and the databases used in the article are Springer Link, Science Direct, Taylor & Francis, Emerald and Scopus.

Results: The results of the research show that during the process of introducing Industry 4.0 technologies, organizations mainly encounter organizational changes related to human resources, employees and organizational culture. The introduction of Industry 4.0 technologies causes changes in the organization's workforce composition, i.e. the greater use of modern technologies increases the need for more qualified employees.

Organization: The research shows the characteristics of the introduction of modern Industry 4.0 technologies in connection with organizational changes. It emphasizes the correlation between the adoption of modern Industry 4.0 technologies and the occurring organizational changes, as well as the importance of combining the two concepts.

Society: The introduction of modern Industry 4.0 technologies to organizations is an area that is most often associated with higher productivity, competitiveness and modernization of processes. The results of this research show how the introduction of modern technologies affects organizational changes and show the importance of simultaneous adoption of modern technologies and organizational changes.

Originality: The results of the research provide new insight in the field of introducing modern Industry 4.0 technologies in connection with organizational changes. When researching the introduction of new technologies, the organizational aspect is often overlooked, and this research presents a new aspect, i.e. the correlation between new technologies and organizational changes.

Limitations / further research: The limitations of the research arise mainly from the limited number of selected scientific publications from the last ten years. For further research, a more extensive empirical investigation using a questionnaire could be conducted, giving a more detailed insight into the field of organizational changes resulting from the introduction of modern Industry 4.0 technologies.

Keywords: Industry 4.0, management, organization, modern technologies, changes.

Ingrid Franko Uhernik, Master of Intercultural Management, received her bachelor's degree from the Faculty of Logistics, University of Maribor in 2010, and her master's degree from the School of Advanced Social Studies in Nova Gorica in 2013. She is currently employed as a professional associate in the field of technical procurement at Krka, tovarna zdravil, d.d., Novo mesto. Since January 2019, when she was elected lecturer in the subject area of logistics and sustainable development, she has also been working at the College of Regional Management (AREMA) in Rogaška Slatina, and the Faculty of Industrial Engineering (FINI) and the Faculty of Information Studies (FIŠ) in Novo mesto.

Mirko Markič received his doctorate in the field of organizational sciences on the subject of innovation from the Faculty of Organizational Sciences of the University of Maribor. After twelve years of working in the automotive industry, he started working at the Faculty of Management of the University of Primorska. He is a professor in the field of management and a senior research fellow, as well as the leader or a member of 17 research projects and economy projects. His bibliography includes more than 690 publications from the field of administrative and organizational sciences and public health (occupational safety).

Aleksander Janež is an associate professor of management and an experienced expert and researcher in the role of director of the master's degree programme in Management and a member of the DigiCross project group. His research experience and interests include various aspects of project management systems (he has participated in more than 35 professional and scientific projects), business measurement systems (green, blue, sustainable), business models and business process management, as well as management tools in the field of digitization, inclusive education and skills, and youth and media.
