

OPERATION RESEARCH AND DECISION MAKING**Project-based learning: the complexity and challenges in higher education institutions**

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Within the context of the 21st century education paradigm competence and new skill require new authentic learning methods. The growing popularity of the project-based learning (hereinafter PBL) paradigm, as an active, student-centric methodology, is related to extended opportunities in terms of knowledge attainment, facilitating the acquisition of several transversal competences such as team work, search and selection of information and synthesis and analysis abilities. Therefore in this paper authors would present main features of PBL identifying aspects that give both students and teachers a kind of drive for the involvement of all parties in the learning process; also discussion on the innovativeness within PBL paradigm is presented and finally some obstacles/challenges are dealt on the basis of leaving an open space for further considerations and possible explorations on the effectiveness using this approach in learning and teaching.

Keywords: knowledge-based cooperation, networking, project-based learning

Assessment of competencies for IS specialists

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Vilnius Cooperative College conducts a study program “Information systems implementation and support” (informatics engineering). Before starting the study program a survey was conducted to clarify demand of such specialists and to assess program’s competencies (Valavičius, 2012). During program existence IT companies encountered with new challenges: cloud computing, big data, using of smart devices (BYOD) etc. Committee of study program decided to repeat the survey in order to improve the study program. The aims of the survey are to identify new demand and needed skills. This article analyses results of the survey and makes conclusions.

Keywords: information systems, skills of IS specialists, new skills for IS study program

Impact of crude oil and US dollars price on the Indian stock exchange

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The speed and magnitude of the oil price decline has the potential to trigger financial strains, which could reduce the global benefits of lower oil prices, although the effects have so far been contained. Countries and companies dependent on oil revenues have already been significantly re-priced, especially those with existing vulnerabilities, but the impact may not yet have been fully felt. In particular, a number of energy firms accumulated sizable debt during the period of high oil prices, and some banking systems saw a marked increase in loan exposures to the energy sector. Moreover, the redistribution of wealth among investors with varying saving and portfolio preferences could have market repercussions, and those effects will also take time to play out. For those concerned about market infrastructure, there does not appear to be evidence of dislocations in the oil markets so far. This article is an attempt to analyse the various factors which are responsible for effecting Indian Stock market.

Keywords: oil prices, US dollar, stock, impact

Way to leadership and competitiveness with Kaizen

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This article describes the experience in crisis new models of enterprises activity, management of changes, relations with personnel are always looked for. One of the most efficient concepts of production and human relations is the concept of Kaizen. It is necessary to introduce modern management tools and principles of corporate management in the public sector. In conditions of WTO the Kaizen system, which is aimed at improving of efficiency and optimization of business processes, is a necessity for enterprises. Kaizen requires a systematic approach and considerable financial investments.

Keywords: Kaizen system, concept, higher education

INFORMATION AND COMPUTER TECHNOLOGIES**Artificial Intelligence technologies in human resource development**

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An essential part of modern management is computing, particularly, Artificial Intelligence technologies. The Artificial Intelligence technologies which are based on reproduction of principles of human intelligence functioning. The Rising of General Artificial Intelligence is impossible without the acquisition of elements of self-consciousness and self-cultivation. But for the solution of applied problems we need applied Artificial Intelligence which performs particular tasks particularly in management. The most difficult task in Human Resource Development is to determine the effectiveness of training costs due to its branching and sophisticated feedback given by improved production results of staff who was involved in the process. To determine the impact of the performance of the company (labour costs, labour costs per person, income, profit, profit per person) based on indicators, characterizing the personnel training on the example of ALC "Severodonetsk factory of chemical non-standard equipment" we use cognitive system IBM Watson Analytics. Found that the main factor influencing the amount of training in the company is the net

income of the company for the previous year. Considering this analysis, it could be argued that decisions on financing of Human Resource Development are carried out on the basis of income of the enterprise from the past period.

Keywords: artificial intelligence, human resource, development

CNN based learning: object classification on images from Aerial Photography

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These years, object recognition on remote sensing images with high resolution had boomed. We trained a multilayer convolutional neural network caffe based to classify the 79 thousand high-resolution and unlabeled optical remote sensing images via the Internet into the 4500 different classes. On the unlabeled test dataset, we obtained error rates of 19.7% which run really well than traditional machine learning techniques. With pre-trained model-aided, GTX750Ti GPU, Intel® Core™ i5-4590 processor, we sharply accelerated progress time. The results compared with the published ones, and good agreement is acquired.

Keywords: CNN, remote sensing image, object recognition