

Pedagogical Sciences

S.I. Belova, E.I. Deza, M.I. Tylkina

The Place of the Course Mathematical Methods in Psychological and Pedagogical Research in the System of Tertiary Higher Education

Key words and phrases: competence-based approach; mathematical methods in psychological and pedagogical research; modular-based approach; psychology and pedagogy; principles of structure and content design of an academic discipline; tertiary higher education.

Abstract: The article considers some questions of teaching the course Mathematical Methods in Psychological and Pedagogical Research to students majoring in psychology and pedagogy of in the conditions of modern higher education. A place of the course in the study programs Psychology and Pedagogical Education is defined. The competences of bachelor and master students necessary for studying the course Mathematical Methods of Psychological and Pedagogical Research developed through the study of the course are determined. The following principles of the course structure and content design have been formulated: scientific character and fundamental nature, continuity, professional orientation and professional importance, practical orientation and practical importance, prospects of innovation introduction, variability and modularity, unity of invariant and variable components in conditions of minimization of the invariant component, humanization and priority of personal development, priority of applied development, informatization. The modular structure of the course consists of 9 invariant, 5 variable and 2 intermediate modules. The experience of using the developed materials in Pedagogical State University and University of Russian Academy of Education is analyzed.

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S.V. Znamenskaya, E.S. Agafonova, V.S. Petrosyan, K.P. Dzhirova

The Results of Implementation of the Model of Developing Information Culture of Students through the Study of a Foreign Language

Key words and phrases: behavioral component; cognitive component; information culture; motivational value-oriented component; research; volitional component.

Abstract: In this article the author describes the results of the study of developing information culture of students in the process of learning a foreign language. The author provides quantitative data on the results of the implementation of the model of developing information culture of students in the process of learning a foreign language. The conducted experiment showed an increase in the proportion of students with a high level of development of all components of information culture.

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A.L. Pozdnyakov

Factors of Effective Professional Training of the Staff Involved in Maintenance of Technical Equipment

Key words and phrases: effectiveness factors; method of expert evaluations; professional training; staff training.

Abstract: The article considers the questions of efficient professional training of cadets of naval higher education institutions in safe operation of technical equipment. Factors influencing the effectiveness of professional training of cadets have been defined. The revealed factors can be used in training methods to increase the effectiveness of training.

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Information Science, Computer Engineering and Management

M.A. Sevodin, I.V. Gordeeva

To the Task of Distribution of Resources for Solving Socio-Economic Problems

Key words and phrases: distribution of resources; game model; nonconvex payoff function; pure strategy solution.

Abstract: The paper explores the the game approaches to the determination of distribution resources. Special attention is paid to the situation, when for some reason the payoff function loses its convexity. The paper studies one class of these functions. It is shown well-known methods of solving this problem can be used, and some socio-economic factors influencing the distribution of budgetary resources can be considered.

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A.R. Davydov, Yu.S. Tregubova

Forecasting Socio-Economic Development Sustainability Parameters of the Russian Federation Regions

Key words and phrases: factor analysis; forecasting; level of sustainable development; regional economy; socio-economic development; statistical methods.

Abstract: This article is devoted to forecasting of the factors of socio-economic development of the Russian Federation regions and research into sustainability development indicators of the regions.

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V.I. Milushkov, A.A. Mitrushin, A.N. Lyulchenko, A.A. Menshikov, V.G. Shved

A Study of Rootkit Information Influence Threat on Dynamic Kernel Data by Monitoring VM Guest OS

Key words and phrases: kernel functions; operation systems; operation system kernel; rootkit; Virtual Machine Monitor.

Abstract: This article covers the threats of information influence on Linux operation system with the help of rootkit technology. The authors propose preventive solution which blocks rootkit attacks on dynamic kernel data by monitoring access to kernel memory with the help of Virtual Machine Monitor (VMM).

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Construction and Architecture

A.R. Baymakhan, Z.E. Zhumanova, A.N. Baybatyrova, R.B. Baymakhan

Calculation of Deformation Stability of “Sloping Stratified Soil Foundation – Foundation – Building” System

Key words and phrases: anisotropy; building; deformation; geomechanics; finite element method; foundation; foundation soil; sloping bed; syncline.

Abstract: The paper describes the data on the mass destruction of houses on the example of a residential district of Karaganda city in Kazakhstan. A system consisting of the foundation, the building and the soil with geosynclinal thick nonuniform anisotropic structure is modeled by the finite element method. The work identifies the results of the study of different steep slopes of the soil foundation, which influences the deformed condition of the foundation and buildings under its own weight.

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Z.R. Tuskaeva

A Conceptual Model of the Construction Machinery Market

Key words and phrases: regional market of construction equipment; primary market; secondary market.

Abstract: The organization of construction machinery market in the current economic conditions requires a serious approach. Competitive factors and lack of equipment force to take informed and well-thought decisions, and require creating a civilized market of construction machinery.

The need for a civilized market of both new and used construction equipment and repair services is increasing. The author proposes a conceptual model of the organization of the regional market of construction machinery.

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Machine Building and Engineering

R.A. Ziganshin, N.S. Zakharov, A.V. Ziganshina

Modeling of Laws of Changes in Operating Conditions in Time

Key words and phrases: custom vehicles; spare parts.

Abstract: This paper considers the problem of supply of spare parts when using custom vehicles in oil and gas industry. The structure of the system is studied. The basic mathematical models of laws of change in operating conditions in time are determined.

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R.F. Minkhanov

Methods of Creating Fingerprints. Phased Generation Algorithm for Synthetic Fingerprints

Key words and phrases: fingerprint; generation; mathematical models; synthetic.

Abstract: Creating accurate recognition systems requires a qualitative test with a database of a large number of fingerprints models. A potential alternative to the collection of large

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databases of fingerprints is the synthesis of fingerprint patterns, i.e. generated images of human fingerprints; parametric models are used to encode essential characteristics of images and editing. Artificial fingerprints imitate the images obtained by electronic scanners for fingerprints. It is also possible to generate indentations similar to those that have been acquired by the traditional “ink technique” with a relatively smaller changes in the algorithm. In this paper, we describe a stepwise algorithm for generating artificial fingerprints.

Chemical Technologies

V.A. Syrovatka, Yu.P. Yasyan, V.V. Saprykin

The Efficiency of the Condensate Stabilization Unit in the Preparation of Gas for Transportation

Key words and phrases: condensate stabilization; degassing; gas condensate; process parameters; rectification; separation.

Abstract: In this article, the trial calculation of a separation process on the condensate stabilization unit in the preparation of gas for transportation on the example of the upgraded compressor station “Krasnodarskaya”. The article examines the connection between the operation efficiency of condensate stabilization unit and losses of target components in the vent disposal system. The calculation results are presented in the form of graphs and tables. The paper proposes a scheme of rectification for the effective operation of the condensate stabilization unit.

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Economic Sciences

I.A. Babenko

Stages of Planning Mergers and Acquisitions (M&A)

Key words and phrases: divestor; economic (synergistic) effect; investment value; investor; market value; mergers and acquisitions.

Abstract: This article analyzes and systematizes the stages of divestment/ investment mergers and acquisitions (M&A); it was found that the key criterion in the selection of these strategies is maximization of the business value.

page 53-55

V.V. Kalygina

The Main Motives for International Expansion in the Consumer Goods Markets

Key words and phrases: consumer goods market; international companies; major barrier in international business; motives for international expansion.

Abstract: The present article analyzes the main motives for international expansion in the consumer goods market. The main barriers in entering new foreign markets and the main reasons for minimizing the international activities are given. The article gives examples of international brands entering Russian consumer goods markets in 2014–2015.

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N.V. Kamenetz

Accounting Policy in Management Accounting

Key words and phrases: accounting policies; management accounting; market relations; business entity; budgeting; expenses.

Abstract: This article describes a technique of developing an accounting policy of management accounting and its elements.

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M.A. Mareeva

Problems of Printing Industry Development and New Ways of Solving Them

Key words and phrases: duties on import/export; import of goods; industry crisis; paper industry; printing industry; raw materials export.

Abstract: Since 2010, there has been a trend towards import substitution of printed products and those of pulp and paper industry. To maintain these industries the government has decided to impose duties on export and a reduction in import duties.

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E.V. Sukhanov

Methodological Approaches to Solving Socio- Economic Development Problems

Key words and phrases: competition; economy; market; profit.

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Abstract: The main stages of socio-economic development are considered. Doctrines of the three great economists – A. Smith, K. Marx, and J.M. Keynes – are analysed through the prism of modern economic development.

A.I. Tikhonova

The Evolution of Views on the Investment Problem in the Course of Development of World Economic Thinking

Key words and phrases: investment; investment activity; investment policy; investment process; political economy; savings.

Abstract: Economic problems have haunted minds of scientists and philosophers since ancient times, as they concern with one of the most important spheres of human life – economics. One of the central questions of economic theory was and remains the issue of investment: the concept, characteristics, and categories. What is investment? What does it represent? What is the difference between investment and savings? Should the government regulate investment activities and how should it do it? There are many answers to these questions from many different directions and schools of political economy and their representatives. This article describes the evolution of the concept of “investment” throughout the history of the development of economic science, the views of the brightest representatives of different schools of political economy, such as mercantilism, the classical school of political economy, Marxism, neoclassical school, monetarism, and the views of modern economists. The author attempts to structure the views of economists of different periods and to identify the most common and applicable in the modern world characteristics and attributes of such a complex and multifaceted concept as “investment”.

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Linguistics

E.V. Astaschenko

N. Muravyev’s “Abelard’s Youth Poem”: Modernist Canon of Life

Key words and phrases: celibacy; decadence; genre originality; irrationalism; marriage; modernism.

Abstract: The paper analyzes the prose of N. Muravev, the undeservedly forgotten author of the early XX century in the context of the era. Particular attention is paid to the theme of love in the light of religious and philosophical ideas of Abelard, the “troubadour philosophy”, who embodied the synthesis of scientific and artistic world discernment. Nine centuries later, his exceptional impulse for freedom, truth and beauty influenced the scientist G. Fedotov, the poets of the Silver Age, and the contemporary writers V. Solovyev and V. Rozanov. The author analyzed the sources that were created owing to “Christian Aristotle”, such as Abelard’s “Story of His Misfortunes”, “Ethics”, “Dialogue of a Philosopher with a Jew, and a Christian,” and those whose heroes were based on Abelard’s personality – Lewis’s “Monk”, Charles Maturin’s “Melmoth the Wanderer”, Hoffman’s “Elixirs of the Devil”, d’Aurevilly’s “L’ensorcelée”, S.Lagerlef’s “Saga of Yeste Berling”, St.Bonaventure’s “Night Vigil”, and Przybyszewski’s “Synagogue of Satan”. “Mixing eroticism and mysticism” (George Piyeman), which was typical of decadents circle, the writer suddenly interrupts the story, and abandons Tristan’s and Isolde’s “immortal lovers”, stylizing the final into a tale of Peter and Fevronia.

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L.M. Kalyanova

Grammatical Analysis of the Sentence as a Prerequisite for Correct Understanding and Translation of a Technical Foreign Text

Key words and phrases: scientific technical literature; technical terms; international words; syntactic analysis; semantic relationship; lexico-grammatical analysis.

Abstract: The article considers some issues of teaching the correct understanding and proper translation of a technical foreign text thorough the lexico-grammatical analysis of sentences, which contributes to comprehension of the text content.

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Land Sciences

Yu.S. Grinfeldt

Distribution of Land Resources in the Outside the Andes Eastern Area of South America

Key words and phrases: environmental management; geocology; geography; land resources; landscape; South America.

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Abstract: In South America the greatest variety of types of land use is observed in the outside the Andes eastern area. However, geography distinctions, and also the character of the spreading surface affect the types of environmental management. Forestry, agriculture, urbanization and mining are the main land use types in the eastern area of the continent.

Biological Sciences

D.L. Matyukhin

On the Brachyblast Structure in Conifres

Key words and phrases: brachyblasts; conifers; phylloclades; phyllomorphic branches; shoot systems; shoots.

Abstract: Contemporary conifers (Pinopsida), as well as other woody plants, are known to have differentiated shoots and shoot systems. The diversity of specialized trophic shoots, or brachyblasts, is great and requires proper description. Brachyblasts, differing from auxiblasts by the number of metameres and the length of internodes, have been studied; their resemblance to brachyblasts in woody dicotyledons was demonstrated. Brachyblasts resembling phyllomorphic branches were pointed out. Extremely peculiar brachyblasts of *Cupressus vietnamensis* resembling cladophylls of epiphytic angiosperms were described. The hypotheses of origin of shortened shoots in *Sciadopitys* by means of shifting the leave's alorythm to the axillary shoot with two prophylls and brachyblasts in *Pinus* by heterotopy of the cotyledon node are proposed.

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Biotechnology and Medicine

I.V. Barkhatov, N.A. Barkhatova

Comprehensive Endoscopy of Microcirculation in the Diagnosis of the Etiology of Gastropathy with Persistent Abdominal Pain

Key words and phrases: abdominal ischemia; angiogenic gastropathy; laser Doppler flowmetry; microcirculation.

Abstract: The results of the study of microcirculation of the gastric mucosa in the vascular and inflammatory variants gastropathy in 237 patients are described. Doppler ultrasound was used to diagnose the pathology of visceral arteries; the microcirculation of the gastric mucosa was performed using endoscopic laser Doppler flowmetry. The results of the research showed that diagnostic criteria of ischemic gastropathy include a reduction in the blood supply volume of less than 18 %, oxygen saturation below 80 % and the level of vascular resistance less than 0.08. The leading role of myogenic mechanism with various changes of respiratory and cardiac mechanisms of regulation of gastric mucosal perfusion eliminates the vascular nature of gastropathy; the prevalence of respiratory mechanism and a significant reduction in cardiac myogenic and mechanisms of regulation of microcirculation are the diagnostic criteria for chronic abdominal ischemia and secondary ischemic gastropathy.

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Ecology and Nature Management

V.L. Adamyan, N.V. Kondratenko

Powder Fire-Extinguishing and Fire-Extinguishing Powders

Key words and phrases: composition; fire suppression; he extinguishing powder; modification; state of aggregation; strengths and weaknesses.

Abstract: The first experience of using fire-fighting powder substances was in 1770, when Colonel Roth (Germany) threw a barrel filled with aluminum alum and stuffed with gunpowder charge for spraying powder into the burning shop. With the development of nuclear industry, Russia began to use fire extinguishing powders in the mid-1960s. Since then, new powder formulations with relatively better characteristics and properties that meet the requirements of GOST have been developed.

Depending on the composition of the extinguishing powders are intended to extinguish fires, in which combustible materials may be in any state of aggregation, and even electrical installations under voltage up to 1 kW. However, today science is looking for a modified composition, which can improve mechanical properties, increase the extinguishing effect and reduce caking. In the aspect of relevance of this issue we have aimed to develop a new and

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modified composition that eliminates the drawbacks of existing powders to a greater or lesser extent.

D.K. Kiryenko

A Vehicle as Part of the Ecological System

Key words and phrases: ammonia; carbon monoxide; environmentally friendly; environmental monitoring; methane; nitrogen oxide; sulfur dioxide.

Abstract: The article is devoted to the development of ecological criteria for vehicle safety in the overall ecological system of St. Petersburg. According to the Committee on Natural Resources, Environmental Protection and Ecological Safety of St. Petersburg, the total emission of pollutants into the atmosphere of St. Petersburg from stationary and mobile sources in 2013 amounted to 536.97 thousand tons, including 2.74 thousand of solid substances, 5.365 thousand tons of sulfur dioxide (SO₂), 396.85 thousand tons of carbon monoxide (CO), 66.836 thousand tons of nitrogen oxides (NO_x), 10.596 thousand tons of hydrocarbons (CH_x), 53.397 thousand tons of volatile organic compounds (VOCs) and 1.184 thousand tons of other contaminants.

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Pedagogy and Psychology

L.A. Petrova, E.Yu. Lazareva

Specific Features of Psychosomatic Structure for Current Disease Situation in Patients with Somatic Diseases

Key words and phrases: disease situation; healthy behavior disorder; internal conflict; motivation and personal sphere; personality; personality resources.

Abstract: The research into psychological and behavioural features of personality of patients with somatic disease is presented. The study of subjective feelings of patients with coronary heart disease was conducted using the checklist of "The Gissen questionnaire of somatic complaints", E.L. Lutsenko and O. E. Gabelkova studied the way of life and behavior of patients using «The questionnaire of healthy behavior disorder», E.V. Fantalova studied the patients' value orientations using the methodology "The ratio of "value" and "affordability" in various spheres of life". The psychosomatic structure of current disease situation in the studied groups of patients was revealed.

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Ts.A. Shamlikashvili, S.V. Kharitonov, M.V. Bykova,

M.A. Khazanova

Experimental Research into Associative Strategies Used by Bilingual and Monolingual Students When Learning Foreign Words

Key words and phrases: clients; cognitive; mediation; mediators; settlement.

Abstract: The study is devoted to the use of methods of cognitive psychotherapy by mediators without the experience of applying these methods and persons having experience in dispute resolution using cognitive skills correction. In total the study involved 41 people, including 14 mediators with different skill levels and 27 people requesting advice in connection with their disputes and their settlement.

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The study used a questionnaire method. The study was devoted to the use of ABC techniques, opportunities to clarify responses and automatic thoughts and their correction. Also, participants' ideas about the usefulness of cognitive technologies in the settlement of disputes and mediation, the intention to use these technologies and the practical benefits of their study were explored.

The results of the study showed that the mediators have an idea of the practical use of cognitive technologies, but having no experience of resolving disputes they tend to underestimate the cognitive technology. At the same time, clients are more committed to the gained skills in cognitive correction.

History, Philosophy and Sociology

S.V. Kruchinin

Spiritual and Moral Crisis of Modern Society: Nature, Causes and Possible Ways of Overcoming

Key words and phrases: crisis; moral; spiritual and moral education; spiritual and moral sphere.

Abstract: The article considers manifestations of the crisis in the spiritual and moral sphere of modern society and the ways to deal with it.

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Legal Regulation

A.A. Pavlov

Spouses' Rights of Inheritance

Key words and phrases: notary; notary certificate; marriage contract; protection of the rights of spouses; conclusion of marriage contract; property relations.

Abstract: The article is devoted to consideration of the spouses' inheritance, where available, or absence of a concluded premarital agreement. The role of a notary in concluding premarital agreements and maintaining an inheritance case is considered. Options for obtaining the property of a deceased person are specified. The norms of the civil and family law are analyzed. The content of a premarital agreement and that of a will are compared. The possibility of access and exchange of information in a single database space through the electronic signature of a notary, the obligation to make a single database of scanned images of certified wills is considered.

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Political Science

N.A. Medushevsky, M.S. Chebotareva

Azerbaijan in International Relations: Risks of Political Development

Key words and phrases: balance policy; geopolitics; global risks; political risk; sustainable development.

Abstract: South Caucasus is the interweaving of transport and energy units, the subject of interest for the world actors, the area with a great potential. A number of circumstances, including local conflicts, unstable economic development, terrorist threats, etc. prevent realization of its full potential. These conditions are defined by the specific geographical location of the Republic of Azerbaijan. The country borders on the South Caucasus and the Caspian-Central Asian region, which is rich in oil and gas, and also provides the shortest way from Iran to Russia. This makes its transit location an important geopolitical factor.

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K.M. Pashintsev, A.I. Lychagin

The U.S. Factor in Modern Russian-Chinese Relations

Key words and phrases: China; geopolitics; NATO's eastward expansion; Russia; Ukrainian crisis; USA.

Abstract: The paper discusses the impact of the American factor on the Russian-Chinese relations. Moreover, the article discusses the reaction of the Chinese public to the foreign policy of Russia and the reaction of Western leaders to China's position on the crisis in Ukraine.

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Yu.V. Tushkova, A.S. Morozova

The Need for Changes in the British Strategy for Terrorism and Extremism Prevention

Key words and phrases: Great Britain; Islamism; jihadists; legislation; preventive measures; strategy for terrorism and extremism prevention.

Abstract: The authors discussed the main activities, which are reflected in the authorities' policy on the prevention of religious extremism and terrorism in the UK. Due to increased terrorist activities of the Islamists in the Middle East a new strategy for prevention of terrorism and extremism is directed primarily at Muslims, who live in the territory of the United Kingdom of Great Britain and Northern Ireland.

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Proceedings of the IV International Scientific and Practical Conference "Challenges and Opportunities of Modern Science"

Pedagogical Sciences

N.A. Baranova, L.G. Mezina

Trends in Entrepreneurial Education in Russia

Key words and phrases: businessman; entrepreneurship education; entrepreneurship; institutions of higher education.

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Abstract: This article is devoted to the development of entrepreneurial education in Russia. On the basis of structural-functional analysis, comparison of the experience in the field of entrepreneurial education of the leading universities the authors identified factors and directions of development of business education. Recognizing entrepreneurship as a powerful economic force, it was revealed that there is a direct relationship between the level of entrepreneurial activity rate and entrepreneurial education.

A.S. Erastov

The Model of Formation of Professional Pedagogical Position of a Coach

Key words and phrases: model; pedagogical conditions; pedagogical position; professional development of a coach; professional position.

Abstract: The article justifies the model of formation of pedagogical position of a coach in professional development, pedagogical conditions of its realization in the process of coaching.

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Omar Laruk, M.V. Garanovich

Experience and Features of Using Scientific and Educational Resources of Massive Open Online Courses (MOOC) in France and the USA

Key words and phrases: access to educational documents; MOOC; multilingual electronic resources; scientific resources; typology.

Abstract: The special trainings MOOC (Massive OpenOnline Course) are open to all via the Internet. They are offered by academic institutions to give everyone an opportunity to learn some training modules or make an update of knowledge. These online coursec can give a validation of acquired knowledge. The first initiatives of major universities (MIT, Stanford, Harvard, etc.) have proposed academic solutions to make them visible over the web, which has materialized in the creation of the OpenCourseWare. The MOOCs contribute to knowledge sharing by providing their date teaching resources. Nevertheless, many problems remain unresolved related to the learner responsibility and course design. In this article, we review the existing platforms in France and the USA and their characteristics.

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E.A. Mikhalkina, N.A. Kirillova

Intellectual Potential of Bachelor Students: Structure and Development in the Process of Mathematical Training at University

Key words and phrases: intellectual potential; intelligence; mathematical training of bachelor students; potential; structure of intellectual potential of an individual.

Abstract: The article analyzes the existing approaches to the concepts of intelligence, potential, intellectual potential and promoting intellectual potential of a student as a complex of four components: cognitive capacity, concentration capacity, creativity and psychological potential. On the basis of the adopted approach the conditions of development of intellectual potential of bachelor students in the process of mathematical training at university are developed.

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E.I. Fedak, O.N. Logovichev, M.S. Saaid

Organizational and Methodological Bases of Military Education of Military Schools Cadets in the Syrian Arab Republic

Key words and phrases: cadets of military schools; educational process; educational process of military schools; the Syrian Arab Republic.

Abstract: The article discusses the characteristics of the substantial components of military education of cadets of military educational institutions of the Syrian Arab Republic.

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Economic Sciences

M.V. Danilina, M.V. Khachatryan

Special Economic Zones: Their Role in the Formation and Development of the Processes of Globalization

Key words and phrases: development; formation; globalization; influence; special economic zones; the international economic integration.

Abstract: The authors focus on the analysis of evolution of theoretical and practical bases of functioning of special economic zones. The article explores the interrelation and interdependence of the processes of the international economic integration and formation of special economic zones.

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M.V. Danilina, M.V. Khachatryan, K.Yu. Bagratuni

Competitiveness of the Economy in Conditions of Globalization: Innovative Aspect

Key words and phrases: competitiveness; development; formation; globalization; influence; innovation.

Abstract: Weak innovation base of the economy negatively affects the evaluation of the competitiveness. The authors examine the impact of this aspect on the degree of competitiveness and economic development.

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M.S. Santalova

Investor Relations Management during Crisis Periods

Key words and phrases: investor relations; IR during crisis; presentation of negative information.

Abstract: The article looks into the methods of investor relations during company's inner problems and economic crises. The author underlines the importance of prompt, honest and transparent communications at such moments. The companies preferring to hide difficulties in the end lose to the companies, which talk about their problems and the ways out. The article goes on saying that not only the management's actions to overcome crisis are important, but also the way they present it to the investors. It can influence both on their career and the market value of the company itself.

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S.Yu. Suchkova

Stages of Development of Relations between the Parties of the Industrial Market

Key words and phrases: cultural distance; geographical distance; industrial market; social distance; technological distance.

Abstract: The relations developing between the participants of B2B market are quite complicated and time-consuming. The interaction of participants in the industrial (B2B) market is quite often complicated by distances that have to be cut for more effective partner relations.

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E.G. Kholnova

Problems of Banking Business Development in a Volatile Financial Environment

Key words and phrases: banking; financial sanctions; financial stability; profitability.

Abstract: The article elaborates on the existing problems of the development of banking business in the conditions of financial sanctions by the EU and United States against Russia; the author substantiates the role of banking management as a fundamental factor of enhancing the efficiency of banking sector of the economy in the unstable Russian economy.

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V.Yu. Chernova

The Main Strategies of Transnational Companies in the CIS Markets

Key words and phrases: non-alcoholic beverages; TNC; marketing; strategy.

Abstract: The article analyzes the state and specifics of the market of soft drinks in CIS, the market leaders, including five TNCs (Coca-Cola, PepsiCo, Evian, Perrier, and Vittel) have been identified. Features of the main strategies of TNCs in the soft drinks market of the CIS countries are exemplified by Coca-Cola and PepsiCo. It was found that each company uses individual strategies and marketing tools that fit its position in the market and are consistent with the goals and objectives of the continuing presence in the region. Special attention is paid to the overall strategic direction and marketing tools that are held and used by TNCs in the times of crisis.

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Machine Building and Engineering

S.E. Lyuminarsky, I.E. Lyuminarsky

Theoretical Studies of Wave Gear with Electromagnetic Wave Generator

Key words and phrases: electromagnetic drive; flexible wheel; harmonic drive; private kinematic error; responding.

Abstract: The article deals with the wave gear with an electromagnetic wave generator on the electromagnets, which consists of a wave gear and electromagnetic wave generator deformation and control systems. The use of these programs allows you to combine the motor, gearbox and braking system, greatly reduce the axial size of the drive, and use computers to control actuators. The paper presents a mathematical model of wave transmission of electromagnetic

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wave generator to the electromagnets based on the dynamic analysis of elastic interaction of elements of the transmission, which gives the opportunity to explore and determine the performance of the wave gear and its basic characteristics. The dependence of the start time and the time limit on the value of the voltage applied to the electromagnets was calculated. Kinematic transfer error under different number of electromagnets was determined.

A.A. Mikhailov

Different Options for Obtaining Optical Coating with Equal Thickness on Cylindrical Surface by Electron Beam Evaporation in Vacuum

Key words and phrases: optical coatings; optics; thin films.

Abstract: The paper considers options for the location and movement of a cylindrical part when applying optical coatings with equal thickness on it.

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M.M. Uvarov

Technical Decision-Making in the Process of Creating a Product Based on Its Competitiveness Evaluation

Key words and phrases: business-processes; competitiveness; decision making; information systems; knowledge bases; ontology; peer reviews; process of product creation.

Abstract: The paper deals with the topical issue of technical decision-making on the issues that arise in the complex process of creating a product, from the formation of its idea to the organization of production and marketing. The concept of the index of competitiveness of the product is formulated. The author describes the method of its calculation and evaluation and possible applications of the method as a tool for making technical decisions at various stages of the product creation. The experience of implementation of the method is based on a practical project to create a product line of general-purpose series of electromechanical actuators. The future development of the method is associated with the construction of ontological models of technical parameters and indicators of the competitiveness of the product and development of the systems for automated decision-making.

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Information Science, Computer Engineering and Management

V.A. Azarov

Algorithm for the Development of Recommendations on Defensive Tactical Aviation Complex Radar Surveillance and Guidance Using Personal Protective Equipment

Key words and phrases: algorithm; aviation complex radar surveillance and missile guidance; personal protection; tactical defense.

Abstract: The article explores the problem of protecting aviation complex of radar surveillance and missile guidance against the enemy. An algorithm for making recommendations on the tactical defense of such a complex using personal protective equipment has been proposed. A description of the proposed algorithm is given, and the mathematical apparatus used is described. The example of using this algorithm has been given.

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P.A. Mitroshin, A.A. Mitroshin, P.V. Gavrilov

The Analysis and Application of Web-Based Geographic Information Systems in the Socio-Economic Sphere

Key words and phrases: analysis of statistical data; API Yandex maps; data visualization techniques; geographic information systems; GIS; GIS applications; socio-economic monitoring; web technology.

Abstract: This article discusses the issues related to the implementation of web-based geographic information systems. We describe the main features of the use of modern mapping services in the global Internet. The implementation of geographic information system based on Yandex Maps API is described; various methods for its use in the socio-economic sphere are proposed.

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M.S. Popova

Correction of Information Search Algorithms

Key words and phrases: database; INIS; ontological communication model of information retrieval; search algorithm; search criteria; thesaurus.

Abstract: The article deals with the search algorithm information. I consider "INIS Multilingual Thesaurus based search descriptor" and its relationship thesaurus (BT, RT, UF).

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The INIS Thesaurus has a wide access to the global Internet; it can be used by any user, which gives a great practical significance for the massive use of these algorithms in different fields.

Political Science

L.A. Vasilyeva, S.M. Soboleva

Verbal Techniques of Manipulating Public Awareness in Modern Information Media Space

Key words and phrases: cognitive framework; media; political discourse; political manipulation; socio-cultural context; verbal impact.

Abstract: The use of media for political manipulation is a real threat to the citizens of a democratic state. The current social-cultural context of political discourse is characterized by the media focus on the mass audience, cultural identity and ideological implications. Covert verbal techniques of influencing millions of people by manipulating information are widely used by modern mass media. Such methods can be identified and counteracted with complex linguistic and cultural analysis.

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Modern Philology Problems

L.M. Kalyanova

On Derivation in English Technical Terminology

Key words and phrases: abbreviations; borrowings; international words; lexico-semantic way; polysemy; technical terms.

Abstract: The article considers some ways of derivation in English technical terminology. Since the terms bear the main semantic load in the specialized literature, the knowledge of methods of their derivation enables to convey the content of the technical text in the most accurate, economical and clear way.

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T.E. Petrova, K.E. Krotova

Comprehension of Different Types of Texts by Children

Key words and phrases: eye-tracking; level of reading; text.

Abstract: The article discusses the process of reading of different text types (complex and simple texts) by two groups of primary schoolchildren: children with high level of reading and children with low level of reading. Eye-tracking method was used.

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Important Issues of History, Psychology and Sociology

A.A. Barieva

Guidelines and Recommendations for Optimization of Public Health in the Region (Case Study of the Republic of Tatarstan)

Key words and phrases: compulsory medical insurance; compulsory medical insurance system; healthy lifestyle; human health; market; medical services; paternalism; sociology of health; social justice.

Abstract: The author analyzed the applicability of market models in health care. The main directions of solving the problem have been outlined; the author developed practical recommendations for optimizing public health in the region in a transformed society: overcoming paternalism, enhancing a healthy way of life, positioning human health as the main value of life. Improving the health care system involves accessing data of empirical research, which was held Tatarstan sociologists and based on the survey of the republic's residents, staff and experts. It was concluded that the introduction of compulsory medical insurance is a prerequisite for the realization of social justice in health care.

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E.V. Levchuk

Fayum Portraits as Ritual Portrait Painting of Ancient Egypt Hellenistic Period I-IV centuries BC

Key words and phrases: encaustic; epoch-making significance; Hellenistic painting; Fayum portraits; iconography; material; portrait; technique; tempera.

Abstract: The paper deals with the problem of the Fayum portraits style. The Fayum

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portraits are the most outstanding works of painting to have come down from the ancient world. The first problem is that these portraits cannot be attributed to named artists, even the name «Fayum portraits» has been objected to, since not all of them were found in Fayum oasis. The Fayum portraits are what have been called «victims of anonymity». The second problem is the problem of origin of artists who created these works. The overwhelming majority of the portraits have Egyptian roots for they were connected with the traditions of funeral cult. In technique, some are painted in encaustic and some in tempera. The Fayum portraits made a great contribution to the development of Christian iconography. The traditions of ancient Egyptian ritual portraits greatly influenced the philosophical conception of Christian monuments.

B.U. Rakhmonov

An Individual as a Self-Organizing System

Key words and phrases: bifurcation; chaos; fluctuation; personality; self-organization of an individual; synergetic approach; synergetics.

Abstract: The article considers the problems of self-organization of an individual from the perspective of synergetic anthropology.

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Biological Sciences

G.V. Seyfulina

The Role of Apoptosis in Breast Cancer Pathology

Key words and phrases: apoptosis; breast cancer; dermatoglyphics; finger patterns; oncopathology.

Abstract: The analysis of dermatoglyphic parameters presented in this paper shows the direction of the search of the dermatoglyphic signs, marking breast pathology. The article deals with the development of the dermatoglyphic patterns in the embryonic stage connected with the flow of the basic substance of the connective tissue and the cellular composition connected with changes in the cell cycle of atypical cells that underlie the formation of malignant tumors.

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