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CURRENT TRENDS IN THE TRAINING OF THE FUTURE SPECIALIST IN COMMODITY SCIENCE

У статті популяризується роль товарознавства в умовах розвитку інноваційних та інформаційних технологій. Проаналізовані сучасні тенденції та напрямки в області товарознавства, основна увага приділена важливості світових тенденцій, що в сучасних умовах, характеризуються процесами глобалізації, посиленням академічної та професійної мобільності.

Інновації в технологіях, а також глобалізація в сфері торгівлі в останні десятиліття ініціювали створення системи, яка могла б гарантувати якість продукції та безпеку навколишнього середовища в світовому масштабі.

Сьогодні товарознавство відгалужується в самостійні галузі навчання, такі як управління якістю продукції та екологічний менеджмент, кваліметрія, загальне управління якістю, проектування систем якості, стандартизація, якість інтелектуальних продуктів тощо. Ці тенденції викликані необхідністю доступу до якісної продукції, її безпеки, збереження екологічних ресурсів тощо. Для того, щоб адекватно проектувати результати навчання при розробці освітніх програм, академічній спільноті необхідно брати до уваги сучасні тенденції в галузі товарознавства. Це забезпечить формування актуальних компетентностей випускників, які будуть затребувані ринком праці.

Ключові слова: *освіта, товарознавство, якість, компетентності, результати навчання.*

В статье популяризируется роль товароведения в условиях развития инновационных и информационных технологий. Проанализированы современные тенденции и направления в области товароведения, основное внимание уделено важности мировых тенденций, которые, в

современных условиях, характеризуются процессами глобализации, усилением академической и профессиональной мобильности.

Инновации в технологиях, а также глобализация в сфере торговли в последние десятилетия требует создания системы, которая могла бы гарантировать качество продукции и безопасность в мировом масштабе.

Сегодня товароведение ответвляется в самостоятельные области обучения, такие как управление качеством продукции и экологический менеджмент, квалиметрия, общее управление качеством, проектирование систем качества, стандартизация, качество интеллектуальных продуктов и тому подобное. Эти тенденции вызваны необходимостью доступа к качественной продукции, ее безопасности, сохранением экологических ресурсов и тому подобное. Для того, чтобы адекватно проектировать результаты обучения при разработке образовательных программ, академическому сообществу необходимо принимать во внимание современные тенденции в области товароведения. Это обеспечит формирование актуальных компетентностей выпускников, которые будут востребованы рынком труда.

***Ключевые слова**: образование, товароведение, качество, компетентности, результаты обучения.*

The article popularized the role of commodity in terms of innovation and information technology. The modern tendencies and trends in commodity, the main focus is on the importance of global trends in modern conditions that are characterized by globalization, increased academic and professional mobility.

Innovations in technology and globalization in trade in recent decades has required a system that would guarantee product quality and safety of worldwide.

Today commodity branches off into independent field of study, such as quality management and environmental management, qualimetry, total quality management, design of quality systems, standardization, quality products and more intelligent. These trends caused by the necessity of access to quality products, its security, the preservation of environmental resources and so on. In order to adequately design the learning outcomes in the development of educational programs, academic community should take into account current trends in commodity. This will ensure the formation of current competencies of graduates who will be needed labor market.

***Key words**: education, commodity, quality, competence, learning outcomes.*

Stating the problem. The history of commodity science dating back is long-time, as description of commodities seemed to be useful for trading already since the medieval ages. Commodity science is part of human culture, and its fundamentals may be of paramount importance for the growth, development and perfection of a person.

Commodity science is an interdisciplinary subject, which is a result of the synergy of three branches of sciences – economic, technical and natural sciences. Commodity science is perceived as a quality science as it combines elements of natural, technical and economic subjects aiming at getting to know the nature of goods which is the result of a series of operational and management processes.

The process of education is largely dependent on the content of educational programs, which should include both the formation of the qualitative characteristics and professional competencies. Innovations that are being developed by scientific employees are a consequence of the process of formation, which formed the individual personality traits that contribute to innovation.

The training the future expert in commodity science – the multicomponent process, which includes the following items aspects: development of employability and personal responsibility for the proposed innovation, understanding of global trends in the development of economy and society, the ability to conduct joint development with international colleges, the vector direction of professional activity in the solution of global problems of mankind. In this regard, the role of commodity science updated as the science and discipline for the person and society as a whole as a mechanism for regulating economic processes and their effects.

Analysis of the recent researches and published works. New developments of commodity science should be considered from the standpoint of the progress of the world economy and society as a whole. The adoption of any economic decision, one way or another, affect the development of science, as it leads to the expansion of its research areas. Modern scientific staff must constantly be aware of new trends in the development of society and are involved in the research. Scientific reflection is very important as for commodity science is the basis for future marketing development. Among the researchers who deal with contemporary trends in commodity research can be distinguished: E. Waginger considers need to teach knowledge on commodity science and technology at economic universities in a globalized world, evolution of commodity science in Central Europe; Juozas Ruževičius considers the problems of eco-labelling; A. Zutshi explore new directions in science of commodities related to quality issues, information and ecological safety; G. Vogel considers dematerialisation and Immaterialisation as options for decoupling resource consumption from economic growt, B. Steen considers environmental costs and benefits in life cycle, E. Marijano – environment and company. D. Ballou focuses on research of information quality, J. Juran – history of Managing for Quality. R. Zieliński, Z. Gackowski, E. Galle, A. Koziolowa, S. Hoeffler, K. Keller, B. Steen, G. Vogel, R. Vossenaar. Jae Kyung Cho, Hyo-Jung Kim, Hyo-Young Shim, Maria Vittoria Contini, Maurizio Doro, Giovanni Maria Ruggiu, Alessio Tola study problems of energy and environmental planning. Raluca Mariana Grosu, Andrea Simona Săseanu, Anatoliy Mazaraki, Grygoriy Pugachevskyi consider commodity science in the age of globalization.

However, studies in the field of commodity science are often limited to technological innovation, the role of commodity science in economics. In this article we will attempt to highlight the current trends in commodity science, which will be a priority for training the future specialist.

The aim of the article is identify areas needing attention in the training of future professionals the basics of commodity science. Also try to perfect and popularize the thinking pertaining to the science of commodities. Today's market is characterized by mobility and updatable, so sales staff-manager should be aware of all the new, to offer the most advanced and high-tech products that can make life consumer fuller, brighter. This explains the increased demand for specialist in commodity science.

Description of the fundamental information. Competence–based learner–centred education is global trend. The basic concepts of this approach are the learning outcomes and competences.

Competence-based learning is valued by employers because it better enables students to apply their knowledge. No one doubts that a university education should provide students with a good academic background, meaning good conceptual formation and mastery of knowledge and certain contents. However, today more than ever, higher education is expected to develop abilities and skills that can be applied to situations at work and in society that students will encounter when they finish their studies. The educational literature on this topic clearly suggests that having an education means not only knowledge, but know-how, and learning to be and to live together, as memorably stated in the Delors Report on education [*Competence-based learning, 2008: p. 49*].

Competence approach is a link between the academic community and the labor market. It competency should be formulated with the participation of students, graduates, employers and other stakeholders and be a reflection of the real needs of the economy.

Society today is demanding new competences of its professionals and citizens in general, who are required to have specific skills and abilities.

In view of these trends the construction of educational programs based on competency approach is the requirement of time. Educational programs should provide employability professionals through the development of current academic competencies effective methods.

At the outset, before addressing issues and ideas relating to the structure and content of business degree programmes, it is important to say something about the role and value of such degrees in society at large. At its heart, business and management education is concerned with the effective and efficient mobilisation and deployment of society's limited resources – natural, physical, human and fi nancial. The effectiveness criterion relates to the provision of those goods and services that are most highly valued by society – either by consumer preferences exercised by purchases made through market mechanisms, or by publicly–funded choices made by governments and their agencies, or by philanthropic donations and voluntary contributions by citizens. The efficiency criterion focuses on the provision of these goods and services in a timely fashion, with high quality and with minimum waste. Business courses aim to provide theoretical and practical knowledge and skills that lead to improved planning, organisation, implementation and control of business and economic activities – not just in the private sector, but also in the public and not-for-profit / voluntary / third sectors. As human activities – from the production of staple foods to entertainment and leisure choices – become increasingly globalised and interdependent, and consequently more complex, the need for organisational and management skills becomes ever more important. Business graduates therefore have an important role to play at the centre of virtually all economic and social

activity, in both the market and non-market sectors, regardless of a nation's state of development [*Reference Points…, p. 21*].

We foster the idea that commodity science is part of human culture, and its fundamentals may be of paramount importance for the growth, development and perfection of a person [*Koziol, Koziolowa, 2006*]. The relevance of commodity science due to a new attitude to the basic concept of science – the «product». The country's economic and social development should be oriented according to sustainable development principle in the way that current satisfaction of consumer needs would not reduce the possibilities of satisfying the needs of generations to come. Commodity-export finance, commodity embargo, a free trade zone – in these economic categories of «goods» is presented in the form of not only economic, but also political agent. Manipulation of such categories as «commodity» is a modern way of political relationship. Therefore, the current geopolitical and economic situation forces to pay attention to the concept of law, democracy, social responsibility, civil relations in the field of commodity science.

Presently the commodity science discipline can be described as one of the fundamental disciplines of commerce and business. Basic knowledge in the field of commodity science greatly replenishes the art of living and is no less important than such fundamentals as communication, economics, etc.

If we consider a graduate as the teaching object, the following items on it are the factors: the content of educational programs and teaching methods to achieve them. Both must be interconnected by means of the design of learning outcomes in terms of competences. The professional competence of the expert in commodity science reflects the level of not only graduate, but also software developers.

The objects of commodity science at this stage should be the commodity categories of knowledge that surrounds the human environment, which compose the human living conditions and sustainable development.

Commodity is protecting certain economic issues affecting the economic and social stability. Recent studies initiated in the area of commodity reflecting current trends of science that correlates urgent challenges of our time.

Recent global research scientists in focused on the following issues. Hamilton J., Wu J. developed a simple model of futures arbitrage that implies that if purchases by commodity index funds influence futures prices, then the notional positions of the index investors should help predict excess returns in these contracts [*Hamilton, Wu, 2015: p.189*].

Joseph Cooper, Ashley Hungerford, Erik O'Donoghue examined the ratio of expected net SCO and county-ARC payments to total net support benefits as a function of variables that influence the size and distribution of these benefits, including key program policy parameters. For corn, winter wheat, and soybeans the ratio to be approximately twice as sensitive to the deep loss coverage rate as to the shallow loss coverage rate [*Cooper, Hungerford, O'Donoghue, 2015*]. Daskalaki C., Skiadopoulos G.

assess the effect of margin changes on 20 commodity futures market [*Daskalaki, Skiadopoulos, 2016: p. 130*]. Berger T., Uddin G. applied wavelet analysis to study dynamic dependence between stocks and commodities [*Berger, Uddin, 2016 p. 280*]. Henderson B., Pearson N., Wang L. examined the impact of the flows of financial investors on commodity futures prices. These finding are consistent with the hypothesis that non-information-based financial investments have important impacts on commodity prices [*Henderson, Pearson, Wang, 2016: p. 1322*].

Quality and environment control are matters of primary interest of the stakeholders (customers, creditors, shareholders, society etc.). Increasing requirements forced to innovate environmental management systems even companies which are not directly linked with manufacturing (real estate companies, educational, public offices, banks etc.). Voluntary environmental activities positively influence the public image of a company and enhance its value. These activities and eco-labelling are becoming more and more important factors of gaining public recognition and powerful marketing tools, influencing customers and manufacturers as well. The US prestigious award for goods and services «US Global Award» is given according to the three criteria a commodity should fit:

1. It should be «Human friendly» i.e. have positive quality and price correlation and satisfy the needs of consumers and the requirements of society.
2. It should be «Environment friendly» i.e. the process of commodity manufacturing should be ecofriendly, fit in environment control standards and have utilization prospects.
3. It should also be «Market friendly» i.e. have wellbalanced range of goods, should not differentiate with the competition norms [*Ruževičius,Waginger, 2007: p. 96*].

This knowledge about the product should be a major vector in the scientific research and studies, participation in which should take not only the academic community but also employers, sponsors and others.

It should be noted that, the transfer of knowledge and technology, as well as co-operation in research between scientists and businessmen should favour development of innovative solutions, which in turn would foster the competitive advantage of companies (consequently, the whole country) on the international arena.Unfortunately, the economies of the Central-Eastern Europe countries are hardly innovative. One of the reasons of such a state of affairs is poor relationship between science and business. Various barriers, such as insufficient investment in activities, complex legal system or lack of fiscal incentives for innovative activities, have been indicated for years. It seems that the biggest problem lies in lack of trust, comprehending of sense and value of co-operation and faith in it success. The development entrepreneurial ideas and initiatives deration by economically developed countries these days. The application of quality, sustainability and excellence policy could raise students' awareness in management, sustainable development, social responsibility not

only from theoretical manuals but also from practical university activities, if the range of the higher institutions' functions could be broadened by the mentioned innovative areas. Therefore, after graduation from universities or colleges, the gained experience and knowledge could be disseminated broader. The spread of one's own positive experience and best practices is not only a principle of total quality management, but also one of the most important objectives of a higher institution's mission. Such practices would benefit a university or a college not only materially, educationally, or culturally, but it would also improve the image of European higher institutions among the global academic community, business professionals and society.

In the educational environment, in addition to benchmarking, there are other academic opportunities that facilitate efficient acquisition of professional competences. Among the methods that form the professional competence of the expert in commodity can be identified following items are:

– Developing curricula that evolve through continuous dialogue with employers to align the training programme with business needs and local realities as well as keep teachers up-to-date about workplace practices.

– Mentoring programmes that link students with professionals to give students a clear understanding of what it means to work in the formal sector and the opportunity to practice communications skills.

– Use a project-based learning approach that simulate the workplace so that youth can gain real-world, hands-on skills.

– Use IT to teach core skills to the marginalized that offers an online learning programme for specialized technologies, e.g., Linux (an open-source operating systems software application).

– Provides e-mentoring that links students with professionals, as mentors to give students access to new professional networks, a clear understanding of what it means to work in the formal sector, and the opportunity to practice professional communications skills.

– Reinforces «work-related» issues such as skills development, entrepreneurship and professional guidance in teachers' education curricula.

– Develop indicators to measure levels of core employability skills, set targets and monitor progress.

– Create, adapt and develop new assessment methods and tools to capture and reflect the core work skills and competences of learners.

– Development of the methodology for evaluating the value and quality of intellectual products (trade marks and brands, industrial design, products with certificates of geographical origin, copyright and neighbouring products, etc.).

These are just some aspects that, in our opinion, are relevant in the development of educational programs of commodity and teaching methods to achieve educational results.

Conclusions from the given research. Education is an indicator of the harmonious development of society. The main characteristics of the economic agenda is the concept of quality and commerce. These concepts are also basic to

the Commodity. Thus, trace direct connectivity that brings us to the assertion that the level of commodity science is a measure of progressive economic change.

Commodity science should make use of the positive changes which take place at the meeting point of science and business. As a discipline that connects economic, technological and natural knowledge, it suits perfectly the business needs and expectations. In order to achieve this, the marketing and sales skills are indispensable: from attractive description of the possessed potential and the conducted research application value, through direct talks with entrepreneurs to make them aware of our «interdisciplinary usefulness», to active application for public funds, which support the establishment of science-business consortia.

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