



Strengthening education in space-based remote sensing for monitoring of eco systems in Israel, Azerbaijan, Kazakhstan

Joint Project Curricular Reform



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Тенденции научно-инновационного развития в области космических технологий и прикладной инженерии

Scientific and innovative trends in the field of space technologies and applied engineering

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Digest

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Сборник статей

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The use of multidisciplinary research for the introduction of new training programs/modules and/or new teaching methods in the field of space based remote sensing and GIS: proceedings of the international project Tempus SESREMO.

Proceedings of Methodological session at the framework of the international project Tempus SESREMO contain works of scientists from universities of the SESREMO consortium and partner universities under the SESREMO-Plus cooperation agreement.

More information can be found on the official project website www.sesremo.eu.

Results obtained can be used to develop new curricula/modules in the field of space based remote sensing and GIS.

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Использование междисциплинарных исследований с целью внедрения новых учебных программ/модулей и/или новых учебных методик в области дистанционного зондирования Земли космическими средствами и ГИС: материалы междунар. проекта Tempus SESREMO.

Материалы методологической секции в рамках международного проекта Tempus SESREMO содержат работы ученых из университетов Консорциума SESREMO и университетов-партнеров, участвующих в рамках соглашения о сотрудничестве SESREMO Plus.

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Полученные результаты могут быть использованы для разработки новой программы или модулей в области дистанционного зондирования Земли космическими средствами и ГИС.

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Summary of the Tempus project SESREMO

Wider objective of the project is ensuring that the target Universities in AZ, IL and KZ can offer two cycle programmes in Space Based Remote Sensing Techniques to improve teaching in line with the new development in the area, the market demand and according to the Bologna Process, last recommendations in Bucharest communiqué and best practice.

Specific project objectives include:

- to update the current two cycle curricula in the target area
- to develop, implement and accredit new practice oriented and student-focus core and transferable curricula and modules
- to bring the Higher Education Institutions of PC closer to labour market

Principal outcomes and outputs are:

- 8 new core and 3 transferable curricula developed/implemented/accredited;
- innovative teaching/learning environment including Joint Web Platform/ GEONETCast terminals and Relais-Repeater Stations (GNT and RRS)
- established, equipped and open for operation based upon Master Classes and pilot operation conducted;
- ECO Monitoring Service Office (EMSO) to support the connection between academia and labour market based on pilot operation in function.
- The service packet of EMSO will include:
 - monitoring service in the area of earth observation on request;
 - courses to retrain engineers in related field;
 - workshops on eco system monitoring for local decision makers.

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5 Deontological training of specialists as the basis for the State anti-corruption strategy

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Refrain from crimes not through fear but through duty – Democritus

Бұл мақалада мамандардың кәсіби парызын өтеуге деонтологиялық даярлығын қалыптастыру еліміздегі жемқорлыққа қарсы күрес стратегиясының қажетті құралы болары туралы баяндалады. Мұнда кәсіби білім беру саласында болашақ маманның жалпы кәсіби даярлығының көрсеткіштері білім, ептілік, дағды, құзыреттілігімен шектелмей тұлғалық сипатына ерекше көңіл бөліну қажеттілігі айқындалған.

В данной статье рассматривается проблема деонтологической подготовки специалистов как средства обеспечения благополучия государства в целом и как стратегический инструмент в антикоррупционной политике страны. При этом показателем общей профессиональной готовности должна выступать комплексная характеристика, заключающая в себе не только знания, умения, навыки, компетентности, но и его личностные качества, обеспечивающие аспект должного в профессиональной деятельности

The problem of deontological training of specialists as means of ensuring of state's wellbeing in general and the strategic tool in anti-corruption policy of the country is considered in this article. Thus, as an indicator of the general professional readiness should be the complex characteristic containing not only knowledge, abilities, skills, competence, but also the personal qualities providing necessary aspect in professional activity

Түйін сөздер: деонтология, деонтологиялық сана, педагогикалық деонтология, деонтологиялық тәрбие, жемқорлық, кәсіби дайындық.

Ключевые слова: деонтология, деонтологическое сознание, педагогическая деонтология, деонтологическое воспитание, коррупция, антикоррупция, профессиональная подготовка.

Key words: deontology, deontological consciousness, pedagogical deontology, deontological education, corruption, anticorruption, professional preparation

Any globalization in economy, education, politics also brings the globalization of corruption. Corruption is a threat to both political, social ranks of the State through the destruction of social institutions as well as to the world economy as a whole.

Transparency International, an international non-governmental organization published its annual report "Corruption Perceptions Index", which indicates the level of corruption in countries around the world. Kazakhstan, along with Russia, Iran, Honduras, Guyana and the Comoros ranked 133 among 176 countries. Having received 28 points out of 100 possible, our country in fighting with corruption has moved to one point compared with previous results.

There is corruption in multi-level educational system. In this case it represents a symbiosis of the monopoly of power, professional authorities, the lack of legal accountability and controllability of continuous teacher's actions. Corruption in this area is particularly dangerous, as it destroys the entire system of moral and ethical education of the future generation, thereby hindering the social and economic development of the country contributing to the growth of organized crime.

In Roman law the notion of corruption ("corrumpere") meant an unlawful act and was treated as "to mutilate, to destroy, to damage, to falsify, to bribe". Dictionary of foreign words characterizes corruption as bribery, the venality of public and political figures and officials. [3]

There are political, economic and social and cultural factors influencing the spread of corruption. They are: authoritarianism in governance, weak legal institutions, regionalism, high level of bureaucratization of society. One of the most important factors of the spread of corruption are dominating material values, i.e. economic basis. It is proved by the cases of solution of financial problems at expense of the life, health or liberty of person: there occurred doctors who can make a false diagnosis, so as not to miss a rich patient or write a prescription for the expensive medications that are sold at his pharmacy; there are journalists who can illuminate "in his own way" any situation for a certain fee and thereby stir up the society; there are teachers who can teach something non-completely in the lesson and then do it as tutor; there are psychologists who can put a healthy person into mental hospital at the request of wealthy or influential person for prominent rewards; there are social workers who find "creative" ways to assign money from State's not very rich funding of these zones, etc. The most terrible thing is that they don't have remorse and the police is loyal to them.

Currently there is such a factor that public authorities are mainly focused on combating the effects but not the causes of corruption. Measures to prevent corruption are not systematized and do not have neither scientific rationales nor procedural characteristics. Therefore, special attention should be given to the strategy of systemic elimination of the causes of corruption, continuous counter through the establishment of preventive space. To create such space it is necessary to bring up the deontological consciousness of society as a whole, in particular, experts. The relevance of deontological upbringing of the society is determined by the severity of the problem of compliance with ethical and professional code of conduct in the process of interaction between unequal parties. It follows that

deontological training of specialists should take worthy place in the anti-corruption strategy of the State.

The term "deontology" (from Greek *deonthos* - proper) was introduced in the 18th century English philosopher I. Bentham to describe education about proper behavior, actions, conduct. Originally I. Bentham put into this concept the rather narrow religious and moral content meaning the duties and responsibilities of the believer to God, religion, religious community, and then used it to refer to the theory of morality as a whole. Soon the concept "deontology" began to be used in different sense as a term denoting the proper behavior, deeds and actions of the individual or professional.

This shows that deontology may become a major weapon in an anti-corruption policy. Corruption, in practice, gave rise to the misuse of authoritative power by civil servants and their violation of law, mafia, family bail and other woes. But if people will put their duties above those temptations, corruption can be prevented. These priorities are taught by deontology.

As it is known any science is characterized by the process of differentiation stemming from specification of its substantive scope. This process is typical for deontology where depending on the content of the professional duty of people of different specialties, one can select the following sectors: legal, psychological, journalistic, educational, medical, social, veterinary. In our researches we consider professional deontology as the science about behaviour of specialists of "man-man" system in accordance with their professional duty. Russian scientists (L. Mardakhaev), professionally motivating, offer to expand horizons of the use of deontological upbringing in all specialists. Deontological consciousness (of civil servant, teacher, doctor, journalist, lawyer, etc.) will facilitate perception of professional duty as own beliefs. Duty is moral form of awareness of the need for action. As said by Victor Hugo: "Man does due act voluntarily. Understanding of the need to fulfil its duty requires oblivion of self-interest".

One of the first medical deontology has made a long and difficult way of development. Its history is rich in vivid, sometimes dramatic events and facts. Thinker and doctor Hippocrates (about 460-370 BC) in his famous "Oath" for the first time formulated the moral-ethical standards of the medical profession. The Hippocratic Oath is used in many countries around the world and sets high moral bar for personality and activity of doctor.

In 1946 the founder of Soviet Oncology Nikolay Nikolaevich Petrov wrote a book about surgical deontology. Since then the foundations of medical ethics is taught in medical universities. But the behaviour of certain medical workers (as evidenced by repeated coverage of such facts in Mass media), their attitude towards patients show that we can not reach good results by just studying deontological disciplines. Therefore, we must not only learn the basics of professional deontology, but also comprehensively, purposefully bring up the deontological consciousness.

Fundamentals of journalistic deontology were laid by Mikhail Lomonosov. He first introduced moral obligations of journalists and proved their practical necessity. Belonging to public professions such as journalism, reinforces the need for harmony of the individual

and society, transferring the objective contradiction between them from the private affairs of an individual employee of the media to the problem of public importance and relevance.

Many quality studies, doctoral thesis are being carried out in legal, judicial and social deontology at the moment. A special place in the system of deontological upbringing is given to pedagogical deontology. Opportunities to form deontological consciousness of future specialists and, in particular, educators are theoretically reasoned and practically developed in various dissertation researches, educational and methodological publications on deontology. As the most powerful lever of influence on moral and moral-ethical orientation of society is in the hands of teachers.

Deontological readiness of a teacher, i.e. willingness to carry out professional duty, is a very facet of professional activity of the subject of education, which is directly linked to his worldview, his social, political and humanistic orientation. Therefore, the need for absolute update of content and form of multilevel vocational education, moving from a position of knowledge, skills and competencies formation to the position of deontological readiness formation, providing quality features of professional consciousness, is becoming more relevant today. As Cicero's saying "Only he lives freely who finds joy in the performance of his duties" should become the leitmotif of the entire system of vocational education.

Deontological readiness of a specialist is a state of mind that will help him to break free from the weight of the material slavery and when due in the professional activity will be inviolable and compulsory. The concept of deontological readiness of a specialist means the unity of theoretical and practical competence, professional ethics in holistic structure of personality and characterises the conscious aspect of his professionalism.

Deontological readiness is a result of deontological training, education of future specialists in university environment in the course of which:

- a future specialist becomes aware of his or her professional duty;
- deontological consciousness, deontological culture are being formed out of knowledge of rational types of professional activity norms and principles;
- deontological self-consciousness is formed through the knowledge of humanity and meanness, justice and injustice, duty, honour and conscience;
- knowledge and self-consciousness transform into faith, belief and creed.

To carry out this threefold task of modern education, that is, to ensure the monolith of relevant personal, subject and meta-subject result of deontological upbringing it is necessary, firstly, to make sure that teacher staff and the whole atmosphere in the educational institution work towards the effective solution of this task; secondly, teaching of any discipline should also focus on that.

Here are some brief suggestions for organizing deontological upbringing in educational institutions:

1. at the departments of multilevel education system to give attention to the deontological preparation of future specialists as to a very important issue,

- introduce the corresponding changes in the content of the theoretical courses and practical training in all academic disciplines;
2. introduce relevant disciplines, special courses “Basics of pedagogical (legal, psychological, journalistic) deontology”, “Deontological basics of teaching”, “Applied pedagogy”, “Professional psychology”, “Professional ethics”, etc.;
 3. prepare, publish and disseminate these lectures’ courses on these disciplines for wide use;
 4. organize systematic research of the problems of pedagogical, social, medical, legal, etc. deontology;
 5. introduce to the themes discussed by the Academic Council of the University questions on organization of deontological upbringing as a critical issue of the educational and upbringing process;
 6. plan and conduct the scientific and theoretical, scientific-methodical (International, republican, university, oblast-level, municipal, etc.) conferences, seminars on the issue of a deontological upbringing and introduction;
 7. accept documents of applicants to educational institutions, taking into account the deontological image of their chosen profession;
 8. to solve the problem of the implementation of the rules of professional deontology in the practice of the teacher;
 9. take into account the requirements of professional deontology in qualifying characteristics when awarding a specific category;
 10. open at the pages of specialized pedagogical newspapers and magazines a column “Pedagogical (legal, psychological, journalistic, pedagogical, medical) deontology”, publish the opinions of scientists, educators, philosophers, psychologists on various issues of the topic.

Deontological component in the specialists training should become critical, central core, determining the level and the success of their professional activity, an element of their vocational training. The critical importance of the entire body of changes in the vocational training of future specialists in the social sphere, proposed in researches on deontology, raises no doubt.

Regulations and instructions in society were always recorded from two positions: the first is the rule of law and the second moral-ethical norms. Deontology applies to the second part. The more civilized the society is, the *more moral regulators of conscious human activities will act, they will tower over the material.*

Several dissertations of Kazakhstani and Russian scientists are dedicated to the topic of forming deontological readiness of specialists of the "human-human" system, i.e., future teachers, doctors, journalists, social workers, lawyers, etc. However these works remain in academic research framework so far. Today it's time to introduce the results of these researches into the educational and upbringing process of vocational education with a view to build an intellectual nation. It is obvious that the primary role in the social and economic progress of the country should be given to the system of professional education.

Therefore, following the example of the Japanese education system priorities in vocational education should be given to upbringing rather than education, i.e. to bring-up to learn,

self-understand the future professional space and create the strategic, pedagogical conditions for this. The fact that upbringing the consciousness can dramatically change people's minds can be proved by both positive and negative examples (Communists, Komsomol, terrorists, Wahabis, etc.), so why not use this opportunity to improve conscious characteristics of society. A positive conscious characteristic of a society is a pillar of the state's welfare in general.

The above characteristics of the deontological training of specialists as the basis of nurturing their deontological consciousness, deontological readiness, is consistent with the articles of the Law of the Republic of Kazakhstan "On anti-corruption", with special emphasis on involving civil society organizations in anti-corruption activities, formation of legal *consciousness* and legal *culture* in complying with anti-corruption legislation.

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