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в городе Ташкенте*

**ИННОВАЦИОННАЯ ДЕЯТЕЛЬНОСТЬ
В НАУКЕ И ОБРАЗОВАНИИ -
КЛЮЧЕВОЙ ФАКТОР РАЗВИТИЯ НЕФТЕГАЗОВОЙ ОТРАСЛИ**

**INNOVATIVE ACTIVITY
IN SCIENCE AND EDUCATION
IS A KEY FACTOR IN THE DEVELOPMENT OF OIL AND GAS INDUSTRY**

*Материалы Международной
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НОВЫЙ ПОДХОД К ОЦЕНКЕ ЗНАНИЙ СТУДЕНТОВ НЕФТЕГАЗОВОГО ВУЗА

Такташева Д.Р.

Филиал РГУ нефти и газа (НИУ) имени И.М. Губкина в г.Ташкенте,
старший преподаватель

Аннотация.

Статья посвящена вопросам организации онлайн-тестирования студентов нефтегазового вуза. На сегодняшний день из-за недавно распространившейся по всему миру пандемии коронавируса возросла значимость проблемы организации дистанционного обучения, в частности, появилась острая необходимость в поиске и разработке новых подходов к организации оценки знаний студентов вузов. В данной статье рассматривается суть онлайн-тестирования, его преимущества и недостатки, а также пути организации онлайн-тестирования в учебном процессе.

Ключевые слова: *новая методика оценки, онлайн-тестирование, образование, качество образования, нефтегазовая отрасль, дистанционное обучение.*

NEW APPROACH TO KNOWLEDGE ASSESSMENT OF STUDENTS AT OIL AND GAS UNIVERSITY

Taktasheva D.R.

Branch of Russian state university of oil and gas (NRU)
named after I.M. Gubkin in Tashkent, senior lecturer

Abstract.

This article is devoted to the consideration of the issues of online testing of knowledge of students majoring in oil and gas. Currently due to the widespread pandemic recently captured the world, the problem of e-learning organization has become crucially important, thus the role of arranging online testing of students of higher educational institutions has significantly enhanced. In this regard, the article discusses the essence of the online testing, its advantages and disadvantages and the ways to organize online testing during e-learning process.

Keywords: *new assessment technique, online testing, education, quality assurance, oil and gas industry, e-learning, cloud learning.*

Coronavirus outbreak mediated pandemic impacted most of the sectors globally. This includes the academic world that consists of millions of enrolled learners and active teachers who previously had regular classes in their institutions, and due to the pandemic, got stuck at the home. To continue the education process, the online class was introduced in most of the countries. With this sudden shift away from the classroom in many parts of the globe, some are wondering whether the adoption of online learning will continue to persist post-pandemic.

Moreover, it should be noted, that the beginning of the XXI century is distinguished by the active growth of scientific knowledge and, as a consequence, rapid development of various industries. The processes of globalization, which makes an impact on all spheres of human activity results in the integration of the world economy and international cooperation in many areas of industry, science, culture.

The leading role of the oil and gas industry in the world industrial production predetermines an undoubted increase in interest in various aspects of the activities of the specialists employed thereof, including issues related to the use of language tools of employees, learning the language discourse of an oil specialist, relations between professional language and national psychology. In this regard, the use of the appropriate assessment of the students' knowledge, in particular, of students majoring in oil and gas becomes crucially important.

In terms of oil and gas education, professional orientation is related to production technologies for drilling wells, oil and gas production, their transportation, etc. These processes belong to the "hazardous production" category and therefore professional competence in its practical component does not enable formation of the "trial and error" method. Meticulous accuracy in the implementation of instructions and scientific and technological awareness of activities in the design of production processes constitute the basis of a specialist's proficiency in the oil and gas industry. In this regard, technologies for teaching professional disciplines of an oil and gas university should be primarily focused on the formation of these components of professional competencies. Therefore, it is important to find the pedagogical technologies that allow optimizing the educational activity of students at the initial stage of studying professional disciplines in the formation of such components of professional competencies of oil and gas industry specialists as scientific and technological awareness of activities in the design of production processes; correctness, accuracy and precision in the development and implementation of instructions.

In general, nowadays in the world practice of e-learning, there is a steady trend of increasingly extensive use of open network information services in the educational process. Sometimes this is due to and the imperative of the time, when

in the recent past, due to the pandemic spread, educational institutions of all levels have been forced to switch to distance education (e-learning) and organize their activities through the various online platforms available. This causes the fact that the very concept of “e-learning” is increasingly being replaced by the concept of “Cloud learning”. As an example, it is possible to mention a popular open online service that are currently used in e-learning tasks - Nearpod.Com - an online platform that allows teachers to create presentations for their classes and share them with students right during the lesson by giving them an access code and there is an opportunity to participate in sessions from any and any platform: iOS, Android, Windows Phone.

The list of information and communication innovations that are used in e-learning is constantly updated with new services, both stand-alone and built-in into modern e-learning environments and education management systems.

The problem of choosing an assessment technique of knowledge digestion is essential and significant when executing the standard of an educational program. In this regard, currently the question of how to more accurately and more fairly determine this quality is considered to be relevant. For the formation of a successful and objective approach, it is substantial that the system of monitoring students' knowledge is diverse: focused on testing knowledge and skills, mastering professional competencies, as well as identifying students' creative abilities and their integral personal and associated emotional attitude to the subjects studied. The test is a short, standardized test designed to provide an objective quantitative assessment of learning outcomes. Tests can be done either on special paper forms or computerized, i.e. using information technology, remote access and communication technologies. Testing is the process of determining the quality of students' knowledge through test materials. Computer testing represents an essential form of testing, which, on the one hand, can minimize the amount of printed forms used during testing, and, on the other hand, bring an innovative component to the activities of an educational institution. Computer tests are done either offline with a connection to the internal network of an educational institution, or online with an Internet connection. Internet - testing is one of the most important forms of quality control of educating specialists, which makes it possible to fairly reliably estimate the volume of learned educational and scientific information. Internet tests are the system of tasks specially arranged and aimed not only at determining the level of formation of knowledge, skills and abilities of students, but also at identifying a range of topics that cause difficulties, at determining deep causes of errors, both real ones made in the testing process and potential ones that can be committed by students in the future, in the changed conditions of control. The use of such a tool for studying disciplines of the

professional cycle and urgent control of students' knowledge is considered to be an efficient tool that enhances motivation of students.

The Branch of the Russian State University of Oil and Gas (NRU) named after I.M. Gubkin in Tashkent city, which is the leading university for educating future personnel for the petroleum industry, has been successfully implementing online testing as well. Within the framework of e-learning there has been launched international edu.gubkin.uz educational platform which enabled to carry out online testing in the form of multiple choice tests or essays. It should be noted, that this platform provides users with numerous choices: to determine the limits of time allocated for testing, to arrange random selection of the testing task/essay topic, etc. One of the most essential features is that this platform enables to assess graphic assignments (charts, diagrams, schemes, etc.) and this is very important since the University educates future engineers.

Online testing is a significant step towards the development of a methodology for monitoring the assimilation of educational material by students. The introduction of testing enables smooth transition from subjective and largely intuitive assessments to objective, substantiated methods of assessing learning outcomes. However, like any other pedagogical innovation, this step should be carried out on a strictly scientific basis, relying on the results of pedagogical experiments and scientific research. Testing should not replace traditional methods of pedagogical control, but should only supplement them to some extent. According to the research results the following conclusions can be made:

2) The majority of higher educational institutions do not have the opportunity to conduct practical classes with each student individually, but they always provide an opportunity for their students to learn to think more globally. This can be done precisely with the help of test items and online testing.

3) An address to the Internet, which is used in the educational process to a large extent meets the internal request of the student in such an educational process organization when he accomplishes educational assignments under conditions of his usual multimedia environment.

4) Moreover, it is the application of tests in real time that currently holds one of the leading places among e-learning technologies for students, making the learning process not only efficient, meeting the requirements of a rapidly changing external environment, but also interesting and even exciting.

ПУТИ ПОВЫШЕНИЯ ЦИФРОВЫХ КОМПЕТЕНЦИЙ СТУДЕНТОВ НЕФТЕГАЗОВОГО ВУЗА

Такташева Д.Р.

Филиал РГУ нефти и газа(НИУ) имени И.М. Губкина в г. Ташкенте,
старший преподаватель.

Гальмутденов Т.М.

Филиал РГУ нефти и газа(НИУ) имени И.М. Губкина в г. Ташкенте,
студент.

Аннотация.

Актуальность темы данной статьи обусловлена влиянием цифровой экономики на формирование набора ключевых компетенций и воспитание востребованных в современном мире специалистов. В статье рассматриваются наиболее распространенные подходы к структуре модели компетенций, востребованных в современном сообществе сотрудников, включая цифровые навыки, и анализируются возможности достижения определенных показателей эффективности в сфере подготовки конкурентоспособных кадров для нефтегазовой отрасли.

Ключевые слова: *цифровизация, цифровая экономика, компетенции, цифровые компетенции, цифровая грамотность, нефтегазовая отрасль.*

WAYS TO ENHANCE DIGITAL COMPETENCES OF THE STUDENTS OF OIL AND GAS UNIVERSITY

Taktasheva D.R.

Branch of Russian state university of oil and gas (NRU)
named after I.M. Gubkin in Tashkent, senior lecturer

Galmutdenov T.M.

Branch of Russian state university of oil and gas (NRU)
named after I.M. Gubkin in Tashkent, student

Abstract.

The urgency of the topic of this article is justified by the impact of the digital economy on the formation of a set of key competencies and education of specialists in demand in the contemporary world. The article discusses the most common approaches to the structure of the competency model of employees in demand

in the current community, including digital competences and skills, and analyzes the possibility of achieving certain performance indicators in the field of educating competitive personnel for the oil and gas industry.

Keywords: *digitalization, digital economy, competencies, digital competencies, digital literacy, oil and gas industry.*

Currently oil and gas business requires implementing constant gradual changes in the oil and gas companies. A new factor is rapidly developing that makes an impact on the vector of development of the oil and gas business, making critical amendments in its ideology and processes.

Nowadays the educational environment focuses on such aspects as competence models for the digital economy within the framework of lifelong learning, the new role of the class instructor in teaching digital skills, innovation-based models of education and advanced pedagogical technologies, optimal balance of digital, professional and soft skills. Therefore, the urgency of the “digital competencies” term is obvious, which means it is important to comprehend the terminology of concepts related to digital transformation. This is necessary for a comprehensive view of digital skills and the benefits of digitalization towards the development of the oil and gas business workforce.

In Uzbekistan development of the oil and gas industry is inextricably linked with the introduction of innovations, and at all its stages. Nowadays oil industry is the locomotive of digitalization and introduction of innovations. Modern industrial mining facilities are so complex that it is almost impossible to work here without digital technologies, automatic control, modeling, advanced equipment, modernization and re-equipment. Starting from the use of digital technologies in geophysics and seismic exploration, to drilling oil and gas wells, automation of oil and gas production processes, pipeline management, transport infrastructure, not to mention the accounting of manufactured products, exports, foreign exchange and tax revenues from the industry: all this is impossible to achieve without digitalization, high energy efficiency and capital-labor ratio.

Today the latest digital technologies help companies achieve a high level of efficiency: smart fields, digital twins of refineries are leaders in the implementation of digital innovations, which is the main element of competitiveness in general. Thus, it is very essential that the students of an engineering university, in particular, the university majoring in oil and gas, study professional software products, which constitute the basis for operating automated workplaces of industry engineers. It should be noted, that the Branch of Russian State University of Oil and Gas (National Research University) named

after I.M. Gubkin in Tashkent is considered the leading university of the Republic of Uzbekistan, which trains highly-qualified personnel for oil and gas industry.

In his Message to the Oliy Majlis, the President of the Republic of Uzbekistan Sh. Mirziyoyev has emphasized that the time has come for an in-depth study of geology: this imposes the Branch with a big responsibility of comprehensive study of geological disciplines. In connection with its implementation the Branch of Russian State University of Oil and Gas (National Research University) named after I.M. Gubkin in Tashkent has launched the Innovation Center for Research. Equipped with more than 30 latest sophisticated computers and workstations, the scientific platform enables to combine investigations of all areas of the oil and gas business, conduct both laboratory and practical classes, as well as applied research. They include carrying out geological and geophysical studies, data interpretation, three-dimensional modeling, hydrodynamic modeling, calculation and justification of risks, analysis and processing of statistical data, large data sets, fulfilling industry orders.

In addition, drilling simulators are widely used to train highly qualified and in-demand specialists in the industry.

Effective training of drilling machine operators is of crucial significance in optimizing productivity, improving safety and minimizing operating costs. Technical errors made in the drilling cycle results in a significant increase in costs at all subsequent stages of production and processing. Based on this, simulators of drilling rigs for operations are widely used in the educational process to provide training, retraining and certification of drilling machine operators in conditions of open pit mining.

The operator of the open pit drilling rig simulator observes the virtual environment on three high-resolution widescreen projection displays located directly around the rig operator's cab, allowing for efficient travel and drilling operations. The cab of the drilling rig is reproduced with high accuracy, all instruments and controls for drilling and movement are correctly located around the driver's workplace.

An example of using the simulator "Drilling rig operator":

- a student (trainee), moving around the location and following the navigator pointer on the right, needs to approach the desired object (the place or object is indicated by a jumping green vertical arrow);

- upon reaching the object, a trainee must press the "use" button, after which the object will be located in the info-space;

- when hovering the cursor over a segment of the object under study, it will be highlighted in yellow and when you click the left mouse button, a panel with information about the segment will appear on the screen;

- the user needs to complete all tasks according to the given conditions, i.e. perform drilling operations advance drilling to avoid damage to equipment.

During the learning cycle of moving and drilling, the rig operator performs all the actions that are performed in real equipment. Models of drilling rigs move and turn realistically, and the exact dynamics of the behavior of the drilling module, interaction with rocks of given characteristics (hardness and drillability) provide a drilling experience that clearly demonstrates the safety and productivity of work.

In conclusion, it is possible to note that a significant role in the process of developing students' digital competencies and providing the digital educational environment necessary for this in universities is assigned to the teacher (instructor) and his working activity undergoes significant changes. Current lecturers and instructors should be able to work in an electronic information and educational environment, use various IT tools, use Internet resources to organize the activities of students in the classroom, as well as follow-up activities. As a result, the process of interaction between teachers and students should change significantly, when the former ceases to be a "translator of knowledge", but becomes more of a kind of "tutor" accompanying the individual training of the latter. It is important to remember that the digitalization of education has become a requirement of the time, and the use of digital technologies should contribute to the further improvement of the educational process. Thus, essentiality to develop approaches to the formation and development of digital skills of graduates of oil and gas universities requires reflection, justification, research, building models of digital competencies in the areas of training, designing tools to support and update digital competencies. Definitely, efficient application of digital competences of the graduate of the oil and gas university in their future career will promote successful development of the oil and gas industry of our country, as well as the national economy as a whole.

List of used literature:

1. Batova M.M. Formation of digital competencies in the system "Education - science – production" // Issues of innovative economics. – 2019. – Volume 9. – №4. – p. 1573-1584.
2. Volgina S.V. On the issue of changing the content and quality of higher education in the digital economy from the standpoint of a competency-based approach // Trends in the development of science and education. – 2019. – Volume 50, №7- p.12-15.
3. Digital globalization: The new era of global flows. Official site of McKinsey&Company [E-resource].