

4. Сурілова О. О. Продовольча безпека в умовах пандемії. *Наукові праці Національного університету «Одеська юридична академія»*. 2021. Т. 28. С. 117–123. DOI: <https://doi.org/10.32837/npnuola.v28i0.704>

5. Колесник В. М., Сулова А. Ю. Оцінка ефективності управління у сільськогосподарських підприємствах Арбузинського району Миколаївської області. *Глобальні та національні проблеми економіки*. 2015. № 8. С. 1258–1264.

Annotation: A holistic approach to the formation of food security in the world and the ways of its implementation were considered. Integral indicators of food security assessment at different levels were analyzed. Strategies for the formation of food security in the world were described and the recommendations for its comprehensive achievement were given.

Keywords: food security, holistic approach, world market, food security indicators, globalization.

УДК 37.09-005.94

DOI 10.31521/978-617-7149-78-0-100

IMPLEMENTATION OF INDIVIDUAL TASKS IN ENGINEERING DISCIPLINES IN THE ONLINE EDUCATIONAL ENVIRONMENT OF THE HIGHER EDUCATION INSTITUTION

Dotsenko N., Doctor of Pedagogical Sciences, Professor,
Mykolayiv National Agrarian University,
e-mail: dotsenkona@mnaeu.edu.ua

Abstract. The implementation of individual tasks from engineering disciplines in the online educational environment of a higher education institution can be an effective way to ensure an individualized approach to student learning. For the successful implementation of such a system, it is necessary to analyze the needs of students, create individual tasks, ensure access to educational material, organize evaluation and feedback, and perform regular monitoring of educational results. The implementation of individual tasks from engineering disciplines in the online environment can significantly increase the effectiveness of learning and provide an individual approach to each student.

Key words: applicants of higher education, individual tasks, mixed approach to learning, institution of higher education.

The work of the future engineer is related to technology. Therefore, during the training of such specialists, the development of engineering thinking is important, which can be ensured by the introduction of individual engineering tasks in the conditions of an online educational environment. The online learning environment of the institution of higher education combines a wide variety of educational software and network technologies, including e-mail, forums, software for collective use, chats, video conferences, audio and video recordings, and a wide range of educational tools based on the use of Web technologies. Technical progress in education does not stand still, so it is important not only to master a set of technical knowledge and

skills, but also to develop engineering thinking, which can ensure the implementation of individual tasks from engineering disciplines in education [1].

The purpose of higher education is for a person to acquire a high level of scientific, professional and general competences necessary for activities in a certain specialty or in a certain field of knowledge. In order to implement engineering tasks in the conditions of an online educational environment, it is necessary to carry out a project on the creation of a constructive improvement of the machine. To carry out the project, it is necessary to have knowledge of the following disciplines: engineering and computer graphics, mechanics of materials and structures, theoretical mechanics, theory of mechanisms and machines, to have skills in mathematical modelling and analysis, to have experience working with software. The results of projects of individual engineering tasks are discussed during round tables and conferences [2].

The results of the implementation of projects using individual engineering tasks in the online educational environment are discussed at conferences or round tables, presenting a presentation of their project and creating test simulators for profiles in the online educational environment. In the course, it is necessary to complete tasks according to the stages of project implementation and send them as a response to the "Task" element in the conditions of the specified environment. Taking into account the orientation of modern education on the competence approach, during the formation of tasks for the project using individual engineering tasks, in the conditions of the online educational environment, it is necessary to lay down competencies for each task. Competencies are selected from the competency repository. The next step is the formation of curriculum templates for students of higher education, on the basis of which the indicator of competence acquisition during the performance of the specified tasks is formed [3].

Before starting the implementation, it is important to understand the needs and the level of knowledge of the students. This will help determine which individual tasks will be useful and stimulating for them. Based on the analysis, creating a set of individual tasks that will meet the needs of students may include practical exercises, projects, test tasks, etc. The next step may be to provide students with access to appropriate learning material that supports individual assignments, which may include textbooks, video tutorials, online courses, etc. The organization of assessment should be based on clear assessment criteria for individual tasks, so that students know what parameters their work will be assessed on. Support and feedback are about providing opportunities for students to receive support and feedback on their individual assignments. This may include consultation with a teacher, discussion of results, or even the opportunity to review and review papers. It is also necessary to constantly monitor the effectiveness of individual tasks and the readiness of students.

Therefore, applicants of higher education in engineering specialties during their studies have specific needs that combine the acquisition of competences and the formation of engineering thought. The realization of these needs is ensured by a combination of learning in the conditions of an online educational environment and the performance of engineering tasks. In order to acquire competencies in the conditions of the online educational environment, the teacher lays down

competencies during the formation of course tasks. For the use of engineering tasks during the implementation of the project, the tasks are formed in such a way that they contain calculation, design, and scientific components for the student of higher education. The combination of an online educational environment and engineering tasks ensures the development of engineering thinking and the acquisition of technical competencies. Prospects for further research can be recommendations for improving the content of tasks for projects with the application of engineering tasks based on the questionnaire completed by applicants of higher education.

Список використаних джерел:

1. Babenko, D., Dotsenko, N. & Gorbenko, O. (2023). Technology of Creation Term Papers in Electrical Engineering Disciplines in the Online Learning Environment. 2023 IEEE 5th International Conference on Modern Electrical and Energy System (MEES), Kremenchuk, Ukraine, 1-5. doi: 10.1109/MEES61502.2023.10402391. [in English]
2. Limano, Ferric. (2023). New digital culture metaverse preparation digital society for virtual ecosystem. E3S Web of Conferences, 388. doi:10.1051/e3sconf/202338804057. [in English]
3. Zang, Yu. (2024). Embodiment of digital art elements in traditional cultural and creative product design based on virtual reality technology. *Applied Mathematics and Nonlinear Sciences*, 9, 10.2478/amns-2024-0103. [in English]

Анотація. Імплементация індивідуальних завдань з інженерних дисциплін в навчальне онлайн середовище закладу вищої освіти може бути ефективним способом забезпечити індивідуалізований підхід до навчання студентів. Для успішної імплементации такої системи необхідно здійснити аналіз потреб студентів, створити індивідуальні завдання, забезпечити доступ до навчального матеріалу, організувати оцінювання та зворотній зв'язок та виконувати регулярний моніторинг освітніх результатів. Імплементация індивідуальних завдань з інженерних дисциплін в онлайн середовище може значно підвищити ефективність навчання та забезпечити індивідуальний підхід до кожного студента.

Ключові слова: здобувачі вищої освіти, індивідуальні завдання, змішаний підхід до навчання, заклад вищої освіти.

УДК 37.09-005.94

DOI 10.31521/978-617-7149-78-0-101

НАВЧАЛЬНИЙ ВІДЕО КОНТЕНТ ЯК ПЕДАГОГІЧНИЙ ІНСТРУМЕНТ ПІД ЧАС ВИКЛАДАННЯ ТЕХНІЧНИХ ДИСЦИПЛІН

Іванов Г. О., канд.техн.наук, доцент,
e-mail: ivanovgo0708@gmail.com

Баранова О. В., асистент,
e-mail: baranovaovprime@gmail.com

Миколаївський національний аграрний університет

Анотація. Розглядається роль навчального відео контенту під час викладання технічних дисциплін та його вплив на активність студентів у процесі навчання. Аналізуються основні переваги використання навчального відео контенту в освітньому процесі, такі як візуалізація абстрактних