

USE OF MODERN INFORMATION TECHNOLOGY IN EDUCATION

Ben Tania, Onofriichuk Yuliia, Golovaty Roman

Lviv State University of Life Safety

Процеси глобалізації, які характеризують розвиток сучасного суспільства, запровадження цифрових технологій на всіх рівнях освіти суттєво змінюють вимоги до професійної підготовки майбутніх освітян. Формування компетентних фахівців, які вільно орієнтуються в інформаційному просторі сучасної освіти, на високому рівні володіють інформаційно-комунікаційними технологіями, використовують їх у навчанні, професійній діяльності, під час проведення науково досліджень, є одним із нагальних завдань вищої освіти.

The processes of globalization that characterize the development of modern society, the introduction of digital technologies at all levels of education are significantly changing the requirements for professional education of future educators. Formation of competent specialists, who are free to navigate in the information space of modern education, have a high level of information and communication technologies, use them in training, professional activity, during the conduct of scientific research, is one of the urgent tasks of higher education.

Ключові слова: інформаційні технології, освітні технології.

Keywords: information technologies, educational technologies.

The current state of the higher professional education is determined by the necessity of permanent modification of the education process of a higher educational institution with the purpose of, on the one hand, ensuring training of skilled employees in the circumstances of varying demands, and, on the other hand, adopting and adapting the successful experience of other educational institutions in their activity [1].

Undoubtedly, at the development of modern methods of education, it is necessary to take into account the rapid growth of the use of information technologies, which has been observed within the last decade, and also a large quantity of educational and technical innovations. One of such innovations is the use of the blended learning, the concept of which assumes that in the current state of the system of higher professional education, traditional education can be combined with the advantages of distant educational technologies. The idea is that a considerable part of the material is transformed into the distant form, allowing time at classes for various interactive forms, which would improve their efficiency. The "teacher-student" and "student-student" interactions can be also implemented in the distant form using various educational elements of the learning management system [2, 4].

At teaching humanitarian students, the Moodle learning management system was used. Informational and educational functionality of the given system was added by the electronic library system, the reading room, and the Internet center of the university. Interaction of the given elements made it possible to build the current infrastructure of the informational and educational environment of the university [3, 5]:

- the administrative unit (organization and control of the education process)
- the educational unit (educational interaction of the participants of the education

process), which is subdivided into three elements:

1. the informational element (the study process itself, use of electronic and printed versions of educational materials).
2. the social element (the direct or mediated dialog in the form of the "student-student" and "student-teacher" interactions, and also group interaction through forums, chats, etc.).
3. the creative element (using databases on the course subject, supplying content for glossaries, accomplishing creative works by means of the wiki-technology, etc.).
4. the program engineering block (hardware and software used for storing information and providing for interaction between the participants of the education process)

The main problem of implementation of the first approach was the organizational complexity, which was aggravated with the functionality of the hardware and software system. Therefore, the second approach was used more often: a student gained necessary methodical

materials, fulfilled some tasks, and based on the studied material developed his own project. At that, the individual work (or in pairs or groups) on project development was organized using the Moodle learning management system. Methodical directions for accomplishment of laboratory works were provided in electronic form.

As a rule, they were combinations of text and some graphic information in the form of screenshots. In certain cases, this content was provided as videos. Videos represented the program work area and audios represented the teacher's comments concerning actions to be done for achieving certain effect. Experience showed that in that case it was easier to teach main principles of operation with the given means in the visual form. Thus, the possibility remains to work simultaneously with methodical stuff; one can pause the video at any time and make necessary actions.

The learning management system application was reduced to acquaintance with the questions for preparation for the respective form of the control and evaluation event and to fulfillment of training tests. Independent work of a student consisted in single or group learning of the part of a discipline, which had been scheduled for distant learning. At implementation of the blended learning methodology, there was a probability of its rejection by some teachers and students. Therefore, among them regular polls were taken using the learning management system for the purpose of modification of the education process. It is necessary to mention the most popular suggestions: use of electronic mail for communication of a teacher with a student; refusal from the blended learning for the benefit of the traditional one; use of the learning management system just for delivery of the training stuff and cancellation of interactive forms.

To sum up, the education, which is compiled using the informational and educational environment with a similar infrastructure, has much in common with traditional education, but it allows using modern production technologies and experience in the circumstances of decreasing the share of intramural classes. At that, the education of students becomes more intensive due to the group work and the creative element of the education and more transparent due to the control through the learning management system and other elements, which together create the informational and educational environment, namely reading rooms, libraries, Internet centers, etc.

Reference:

1. Kumar, S. and R. Toteja, 2012. Print to digital: a study of students' psychosomatic cost in traditional and e-learning. *Procedia – Social and Behavioral Sciences*, 67: 553-560.
2. Рак Ю. П. Формування проектів методом візуалізації інформації для підвищення стану безпеки торгово-розважальних центрів / Ю. П. Рак, Р. Р. Головатий // *Управління проектами у розвитку суспільства: зб. тез доповідей XII Міжнар. конф.* – Київ: КНУБА, 2015. – С. 226 – 228.
3. Safran, J., 2013. Using Information Technology in English Language Learning Procedure: Blended Learning. *Procedia – Social and Behavioral Sciences*, 83: 514-521.
4. Li, X. and F. Gao, 2012. Development-Driven E-learning Education Model and Application in Teaching Information Technology Original Research Article. *IERI Procedia*, 2: 854-858.
5. Зачко О. Б., Кобилкін Д. С., Головатий Р. Р. Управління безпекою на стадії планування проектів з масовим перебуванням людей з врахуванням категорії складності. *Вісник НТУ «ХПІ». Серія: Стратегічне управління, управління портфелями, програмами та проектами.* Харків: НТУ «ХПІ», 2018. № 2 (1278). С. 53 – 58. DOI: 10.20998/2413-3000.2018.1278.8.
6. Зачко О. Б., Головатий Р. Р. Імітаційне моделювання потоку відвідувачів торгово-розважального центру. *Управління проектами: стан та перспективи: матер. XII міжнар. наук. - прак. конф.* Миколаїв: МНУК, 2016. С. 96 – 98.
7. Зачко О. Б. Мультиагентна модель управління безпекою при плануванні проектів створення об'єктів з масовим перебуванням людей / О. Б. Зачко, Р. Р. Головатий. // *Вісник НТУ «ХПІ». Серія: Стратегічне управління, управління портфелями, програмами та проектами.* – 2017. – С. 46–51.