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INNOVATION AND HEALTH-SAVING TECHNOLOGIES IN THE EDUCATIONAL PROCESS

Васанті Г., Аджіні П. С. Інновації та здоров'язберігаючі технології у навчальному процесі.

Ключові слова: IoT, імерсивне навчання, ШІ, гейміфіковане навчання, хмарні обчислення.

Abstract. *The technology changed our life tremendously in a good way. Life is going to be easier and even better day by day. One of these improvements affected positively on our education system. It gives us a chance to saving our time to rewrite the notes in the classroom because we can access them anytime anywhere. It also more effective for teachers, in order to do not waste their time to prepare the notes and jot down the notes on the board. Instead, gives them more time to explain the course better. A teacher can teach students with virtual reality and other good aspects that technology brings to one's life, providing a chance of distance learning for all people in the world. It's found that all of these improvements give chance for saving time and energy and all of them are positive and made the life easier. The application of technology in education sectors helps bridge the gap between students and teachers and strengthens the relationships between teachers and students. A wide application of innovation technologies in education is highly significant. Present study explores innovation technologies of learning in the modern education.*

Keywords: *IoT, immersive learning, AI, gamified learning, cloud computing.*

Introduction. The evolution of technological know-how has impacted each component of our lives from banking to the way that we communicate with each other. In fact, science has end up an indispensable section of sustaining society, and its infusion with training is therefore inevitable. Technology not solely presents college students with access to countless online resources, but additionally aids them in the studying process.

Technology brought many different things to our life and it affected our current lifestyle so much. Improvement in technology provides many opportunities for the human to do everything even beyond their imagination. It made our life easier and better in many different aspects of our life such as work, education, healthcare, entertainment, etc.

Technology changed our education system tremendously and this was very beneficial for students, teachers, organizations and the education system. The first advantage of this transition, the learning method changed totally and it is going more accessible for student and decreased the wasting time of teacher which they should put to write the notes on the board or carrying heavy resources to teach the students.

The first positive aspect of this transition gives a chance for students to communicate with their teachers whenever they got stuck with problems. The teacher can answer questions and solve their problems faster than before and even can give them feedback on their every assignment before seeing them in the class. Furthermore, students have lots of online material to review their courses anywhere and every time they want.

The second benefit of this advancement is providing a virtual lab for students. Students can learn better with virtual labs. Because it provides a chance for them to learn the theory and interact with the reality of theory at the same time. As a result, they can understand that topic better.

Few innovations that really helps the education of students are following.

1. Immersive Learning. Immersive technologies augment traditional classroom-based and online learning. Educators utilize extended reality (XR) devices and applications to leverage immersive learning content. Since most immersive learning solutions support e-learning, it further improves the accessibility and flexibility of education. Bidirectional and interactive solutions make learning more enjoyable and improve the pedagogical experience. Immersive learning also enables non-linear activities wherein the learners' actions reveal numerous possibilities, unlike traditional learning processes.

2. AI. The improved accessibility to education and increased adoption of remote learning due to the pandemic significantly increases the workload for teachers and school admins. AI and machine learning-based solutions in the educational sector replace numerous manual tasks like attendance tracking and activity monitoring, among others. This reduces the administrative burden on the teachers and allows them to concentrate more on interacting with students.

3. E-Learning. The pandemic forced schools and other educational institutions to shut down for long periods, accelerating the adoption of distance learning. To facilitate this transition, education technology startups and other big companies, like Zoom and Google, develop customized online platforms. This eliminates the need for long-term, high-cost infrastructure development for educational institutions. Besides, e-learning enables students to access education through the internet, reducing knowledge gaps. Recorded lesson videos also offer

flexibility for students to learn in their own time. Integrating immersive solutions and game-based learning into online platforms furthers the effectiveness of virtual learning.

4. Big Data & Analytics. Integration of online learning platforms provides schools, colleges, and universities with critical student data. This allows educational institutions to closely monitor individual students and deliver better education based on their needs. Big data and analytics startups utilize the students' data, such as their examination scores and performance in co-curricular activities, to generate personalized insights. Such solutions also track and analyze the overall performance of the school to identify opportunities for improvement. For instance, learning analytics solutions allow educators to track individual student strengths and weaknesses to provide more personalized care.

5. Personalized Learning. Personalized learning customizes the course to the pace and preferences of the learners. The transition to e-learning at educational institutions empowers teachers with student-specific insights, allowing them to make courses more engaging. This provides better control for students over their education and streamlines learning based on previous experience. Consequently, it improves knowledge retention and increases motivation.

6. Video-assisted Learning. While the COVID restrictions are lowering and students are returning to schools, they expect the same level of engagement as online classes. To ensure this, startups develop video-assisted learning solutions. They allow educators to augment curriculum-based content with publicly available videos or their own videos. This approach improves students' comprehension and cognitive abilities. Video-based educational supplements also reinforce the ideas taught in classrooms.

Conclusion. Health-saving technologies should be considered as an integral part of the educational system and everything related to education - methods and techniques of training and education, the level of professional culture of teachers, the conditions of the educational process, etc., everything is directly related to the health of students. Today, the issue of the health status of student youth is very acute – the present and future intellectual and labor potential of our country. The system of higher professional education is closely related to health - the effectiveness of education and up bringing in higher education is largely determined by the level of health of students, and the quality of education cannot be considered outside the context of labor costs and the health of subjects of the educational process.

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