THE USE OF EDUCATIONAL ONLINE PLATFORMS AND INTERACTIVE VIRTUAL SIMULATORS IN TEACHING INTERNAL MEDICINE DISCIPLINE TO ENGLISH-SPEAKING STUDENTS OF THE INTERNATIONAL FACULTY

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Introduction. Today's conditions require dynamic adaptive improvement of modern teaching methodology in institutions of higher medical education. Achieving a new quality of education against the background of global informatization of the educational process is possible with the implementation of a number of components, among which is the creation of a unified educational environment using modern educational platforms and interactive virtual simulators [1, p. 18; 2, p. 63]. The implementation and use of such approaches is designed to ensure more effective preparation for offline practical classes.

Purpose: to analyze and explain the possibilities of increasing and improving the effectiveness of the educational process in teaching "Internal Medicine" with the help of online educational platforms and interactive virtual simulators.

Main part. The principles that are included in the potential development of the latest approaches to learning technology are based on some legislative and regulatory documents for the development of higher education in Ukraine, the implementation of the principles of open science, the digital transformation of education and science, the program of informatization, the development of the information society, the development of distance education, etc. It should be noted the leading role of the modern informational medical online space as well as the rapidly progressing development of software for simulating clinical conditions, virtual patient, artificial intelligence technology, etc. [3, c. 584]. The introduction of measures on the use of online services for the training of the holders of the qualification ensures the achievement of generally recognized goals, namely: the variability of the forms of presentation of educational content; completeness and availability of educational materials; variety of forms of interaction; mobility and indirectness of communication [4, c. 91; 5, c. 12].

Educational platforms and remote services as online tools and systems provide remote and mobile access to modern educational materials and recommendations. They allow to implement an individual approach to the process of acquiring knowledge, the use of such multimedia resources as video and audio recordings, presentations, etc., online consultations/classes (e.g. Google Meet), lifelong learning, interactivity and cooperation (e.g. teamwork in small groups). At the same time there are some implementation problems as technical limitations, economic, linguistic, terminological difficulties of uniform medical standardization, privacy and cyber security. The most widespread educational online platforms (AMBOSS, CASUS, Osmosis, Labster, Lecturio, Complete Anatomy, Medscape, ClinicalKey, Alison Empower Yourself, etc.) differ in their purpose for mastering certain disciplines, skills, achieving certain competencies, professional goals [6].

AMBOSS is an interactive resource for enhancing critical thinking based on clinical cases that contains a lot of educational videos, histological preparations, X-ray, CT and MRI images, etc. The platform is available only in English, German and other foreign languages [7].

CASUS Virtual Patient System presents the patient's history organized into didactic blocks with findings and treatment. Each clinical case consists of 5 to 25 screen cards, each of which is a variable combination of hyperlinks, multimedia materials, expert commentary for additional information and interactive elements. The resource has more than 200 "virtual patients". Clinical cases are presented in Ukrainian and English [8].

ClinicalKey is a clinical knowledge database for healthcare professionals and students providing access to leading full-text reference books and journals, drug information, videos, practice guidelines, and more.

Osmosis is a medical educational platform that offers users clear, informative and interesting educational content in English. Osmosis library consists of over 2000 videos on pathology, physiology, pharmacology and clinical practice as well as relevant questions, flashcards and notes. There are some general inconveniences such as accessibility to online platforms (registration from corporate accounts, limited action terms), lack of uniform standardization between different countries (use of different clinical recommendations and schemes, adjustment to a different structure of medical services, etc.).

Interactive learning methods and interactive virtual simulators form such important competencies as knowledge, skills, abilities and the desire for self-development. Interactive methods most correspond to a person-oriented approach, since they involve co-learning where a student and a teacher are the subjects of the educational process. Use of online platforms, including Google Class, Meet is enough to implement the principles of universally recognized interactive methods in the study of Internal Medicine. Clinically and diagnostically oriented interactive training methods and virtual simulators are of the greatest importance among them. Case-based learning (CBL) or "case-studiesis" is a method of active problem-situational analysis based on learning by solving specific task-situations. "Brain storm" is used to receive several options for an idea of the clinical situation followed by the analysis from the group in a short time. There is also used a method of working in small groups (team). Team-based learning (TBL) is the joint activity of students in a group under the guidance of a leader-teacher is aimed at solving a common task by creatively adding the results of the individual work of team members. The purpose is to get cooperation skills and other important interpersonal skills [9].

Simulation training in modern medical education is also implemented with the help of Body Interact virtual patient simulator

(simulation modeling tool), virtual reality medical simulators that allows to improve and refine the quality of processing and assimilation of knowledge and skills.

Conclusions. It is advisable to use platforms for distance/online learning as additional resources, especially in conditions of limitations to offline learning, and to diversify students' getting of modern knowledge. The use of interactive methods will contribute to increasing the level of motivation in the development of both professional training skills and creative experience. Virtual simulators can be used in preparing practicing practical skills in communication, diagnosis and treatment. Thus, the above-mentioned methods, when they are effectively applied in combination with offline training on a patient, are aimed at improving and increasing the quality of the educational process.

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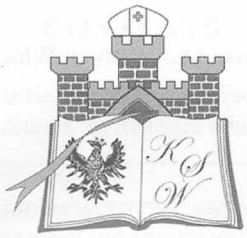
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