

O.I. Gura <sup>1</sup>,  
Z.M. Ragrina <sup>2</sup>

## ENRICHING THE CONTENT OF FOREIGN MEDICAL STUDENTS' INDEPENDENT WORK BY ON-LINE COURSES ON THE EDX PLATFORM

Zaporizhzhia National University <sup>1</sup>  
Zhukovsky str., 66, Zaporizhzhia, 69600, Ukraine  
e-mail: guru.olexandr@gmail.com

Zaporizhzhia State Medical University <sup>2</sup>  
Maiakovskiy av., 26, Zaporizhzhia, 69035, Ukraine  
e-mail: ragrinazhanna@gmail.com

Запорізький національний університет <sup>1</sup>  
вул. Жуковського, 66, Запоріжжя, 69600, Україна  
Запорізький державний медичний університет <sup>2</sup>  
пр. Маяковського, 26, Запоріжжя, 69035, Україна

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**Abstract.** Enriching the content of foreign medical students' independent work by on-line courses on the edX platform. Gura O.I., Ragrina Z.M. The article explores the benefits of using computer technology in the educational process and emphasizes their ability to increase the motivation of foreign medical students to study. Using the latest technologies in the educational process is a demand of time. Intensifying the interest to the discipline and improving the quality and level of knowledge of students is the purpose of such using. The necessity and importance of on-line education at the current stage of society development is substantiated. Using effective techniques and methods of online learning, creating a variety of online courses, engaging students in an independent creative process – this is the optimal way to update the internal reserves of the educational process. The role of students' independent work in the educational process is determined. It is noticed that the independent work of students requires the same organization and methodological support as the traditional class work. The peculiarities of the content of independent work of foreign medical students are revealed and their communicative needs are determined. In accordance with the subjects of the educational programs for specialists in the field of knowledge 22 "Health care", specialty 222 "Medicine" and according to the communication needs, EDX on-line platform was selected and created for creating and implementing online special courses for independent work of foreign students at different stages of study. The structure of individual online special courses is analyzed, the purpose, tasks and results of each of them are highlighted. The subject, distribution of classes, structure, linguistic, speech and communication material of the on-line special course "Introduction to the specialty: scientific speech" are characterized. The specificity, orientation, purpose and specifics of the task of the on-line special course "Professional communication: doctor – patient" are revealed. The conclusions about the necessity and appropriateness of the application of the specified online special courses in the process of preparation of foreign students in medical institutions of higher education.

**Реферат.** Збагачення змісту самостійної роботи іноземних студентів-медиків шляхом впровадження онлайн-спецкурсів на платформі edX. Гура О.І., Рагріна Ж.М. У статті з'ясовано переваги застосування комп'ютерних технологій у навчальному процесі та наголошено на їхній здатності збільшувати мотивацію іноземних студентів медичних закладів вищої освіти до навчання. Використання новітніх технологій у навчальному процесі – вимога часу. Метою такого використання є посилення інтересу до дисципліни та підвищення якості та рівня знань студентів. Обґрунтовано необхідність та значущість онлайн-освіти на сучасному етапі розвитку суспільства. Використання ефективних прийомів та методів онлайн-навчання, створення різноманітних онлайн-курсів, залучення студентів до самостійного творчого процесу – це оптимальний шлях оновлення внутрішніх резервів навчального процесу. Визначено роль самостійної роботи студентів у навчальному процесі. Зазначено, що самостійна робота студентів вимагає такої ж організації та методичного забезпечення, як і традиційна аудиторна робота. Розкрито особливості змісту самостійної роботи іноземних студентів-медиків та визначено їхні комунікативні потреби. Згідно з тематикою навчальних програм підготовки спеціалістів фахівців галузі знань 22 «Охорона здоров'я», спеціальності

222 «Медицина» та відповідно до комунікативних потреб обрано та охарактеризовано дистанційну платформу edX для створення та впровадження онлайн-спекурсів для самостійної роботи іноземних студентів на різних етапах навчання. Проаналізовано структуру окремих онлайн-спекурсів, виокремлено мету, завдання та результати кожного з них. Охарактеризовано тематику, розподіл занять, структуру, мовний, мовленнєвий та комунікативний матеріал дистанційного онлайн-спекурсу «Вступ до спеціальності: наукове мовлення». Розкрито специфіку, спрямованість, призначення та особливості завдання дистанційного онлайн-спекурсу «Професійне спілкування: лікар – хворий». Зроблено висновки про необхідність та доречність застосування зазначених онлайн-спекурсів у процесі підготовки іноземних студентів у медичних закладах вищої освіти.

The peculiarity of foreign students' studying in universities of Ukraine is the fact that their professional training starts with the studying the language which this university uses. This is the first and one of the basic conditions for the success of students' professional development that is why the constant search for new and more effective tools and technologies is relevant nowadays.

Using the latest technologies in the educational process is a demand of time. Intensifying the interest to the discipline and improving the quality and level of knowledge of students is the purpose of such using. In accordance with the provisions of the Bologna Convention, educational standards and curricula a special place in the learning process is given to the students' independent work. It takes almost 50% according to the new educational programs [4]. That is quite significant in the process of studying the discipline. Therefore, independent work of students requires the same organization and methodological support as the traditional class work. Technologies using the opportunities of the Internet are the most promising in this field nowadays. So that distance learning is one of the forms of students' independent work. Using effective techniques and methods of online learning, creating a variety of online courses, engaging students in an independent creative process – this is the optimal way to update the internal reserves of the educational process.

The most important arguments of on-line education are:

- the independence of the listener from the educational organization's geographical location, health status or employment;
- the opportunity for the student to participate directly in the learning process: to use the individual mode of study, determine the speed and sequence of studying the material independently, etc [1].

In the context of pedagogical theory the distance learning as a system allows to implement the modern requirements for education completely, to use personal approach, to organize more intensive process of learning and exchange of information.

The system of distance learning consists of a set of software, methodical and organizational measures that allow tutors form individual and group prog-

rams in the fields and specialties according to the educational standards; it also provides the opportunity to test knowledge through the Internet.

Using on-line technologies for the organization of the students' independent work is able to open new possibilities:

- to provide prompt transfer of tasks to students;
- to develop technical and soft skills;
- to learn to analyze and synthesize knowledge
- to provide a choice of different sources of information, etc.

One of the most popular online distance-learning platforms is the OpenEdX interactive platform, which allows teachers to create dynamic courses. OpenEdX is an open-source platform that offers students and teachers new avenues for creativity and that adapts to individual learning needs [3]. In addition, through this platform, students will be able to schedule independently their studies, view course materials or perform exercises at any convenient time, but within the time allotted for the course. In view of these advantages, we have chosen the interactive OpenEdX platform for further work.

Having studied the needs of the future foreign medical specialists in the preparation for professional communication, the goals and the expected result, we decided to develop educational and methodological support of distance on-line special courses and to include them to the educational process of the departments of language training. Such form of work with material will provide students the opportunity to learn not only during the class but also at home independently, to improve their language and speech skills in professional communication, to use obtained knowledge in their professional activity directly. Moreover in our opinion special on-line course will prepare medical students to solve their professional problems and will make the process of language training more effective. We consider this approach will improve the quality of foreigners' language training due to the reforms of the modernization and computerization of Ukrainian higher education.

In order to identify the actual communicative needs of future foreign medical specialists we conducted special questionnaire of students and

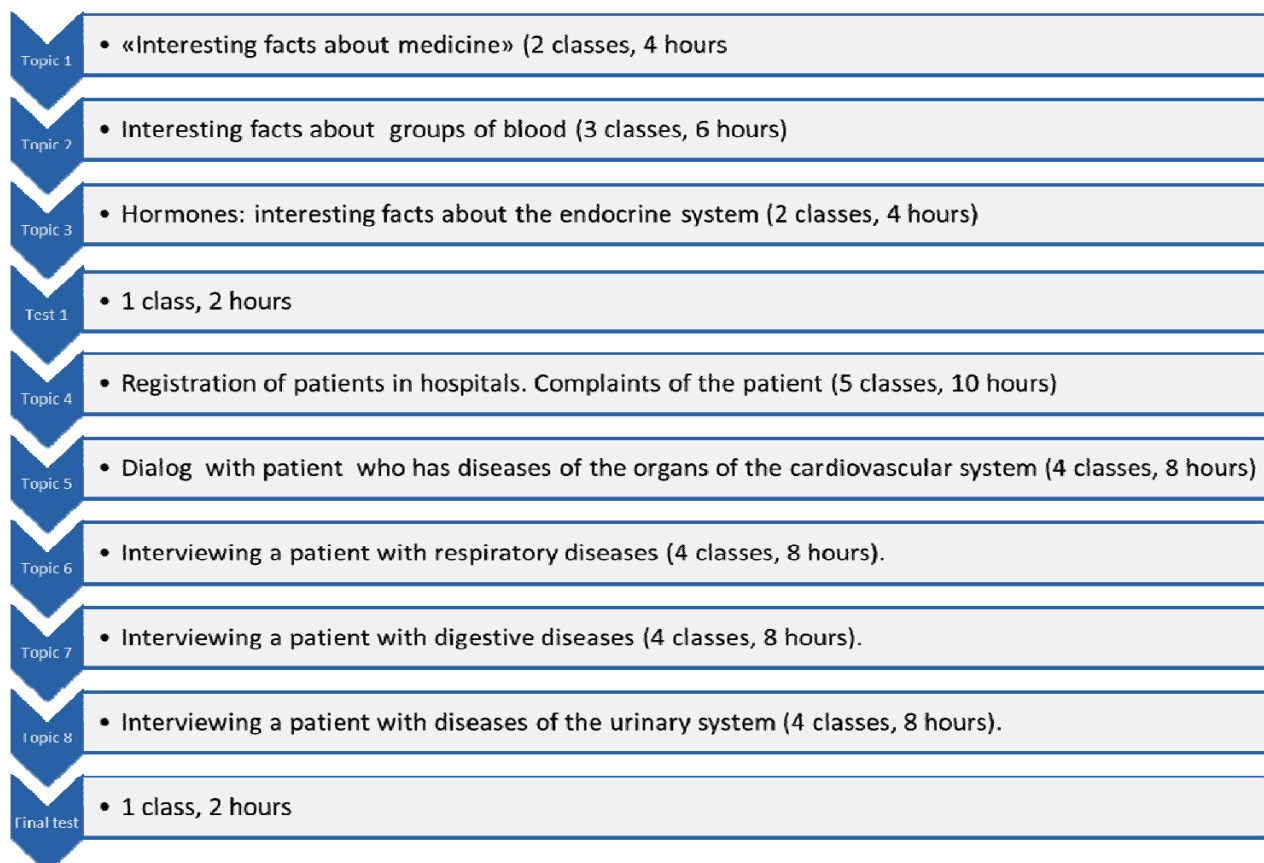
teachers. The results of the questionnaire made it possible to determine the content and the most necessary meaningful content of distance special on-line courses [2].

We noticed that it is appropriate to start the process of introducing the distance form of work with the materials of the professional sphere from the second year of study when students have already developed general communication skills. That is why it is necessary to include the preparatory distance special on-line course «Introduction to the specialty: scientific speech» to the second year of preparation students for the professional communication. This on-line course will become the basis for the professional special on-line course «Professional communication: doctor and patient» in the third year of preparation students for the professional communication.

The purpose of such special courses is the activation of independent work of future foreign medical specialists, improving their communication

skills that are necessary and sufficient for the implementation of educational and professional communication. The materials of such special courses should be selected according to the communicative needs of foreigners and the period of study. That is why special on-line course «Introduction to the specialty: scientific speech» precedes the special course «Professional Communication: doctor and patient» as the basis for further work. This course was included to the educational program of the second year of master's degree in medicine, the field of knowledge – 22 «Health», specialty – 222 «Medicine», professional qualification – «Doctor».

The purpose of this on-line course is to develop and consolidate the language, speech and communication skills that were acquired in the practical classes. The volume of common and professional vocabulary is fixed, skills and abilities of working with texts of the professional sphere are perfected during the work with this on-line course.



#### Scheme of organization of the special on-line course «Introduction to the specialty: scientific speech»

Every lesson must have its own purpose, task, assignment, time allotted for execution. Classes for students of the special course are opened gradually

after a certain period of time in accordance with the topics learned in the practical classes.

The main forms of work are:

- work with the active vocabulary of the topic (graphic, audio and video presentations of terms and their definitions);

- work with texts of the professional direction (reading, listening, analysis);

- work with professional video clips;

- work with training sets provided by the OpenEdx platform:

- «Checkboxes» – the choice of the correct variant from the list of the given (for example, restoration of a question line of the doctor's dialogue with the patient);

- Dropdown – a drop-down list of answers to a given question (for example, confirmation or denial of information: «yes / no»);

- «Multiple choice» – multiple choice / establishment of correspondences (for example, selection of symptoms of a specific disease from the list of listed or matching between the spoken language of the patient and the professional language of the doctor);

- Numerical Input – numeric keypad input used to find information that requires numerical specificity (For example: «What is the temperature called subfebrile? – 37.1-37.4»);

- «Text Input» – text input from the keyboard (for example, filling in a patient's medical record).

Each lesson should also include feedback from the tutor, consultations, and group discussions using Skype for business, chatting etc.

After passing the special on-line course «Introduction to the specialty: professional speech» students will gain knowledge in vocabulary about: features of organization of professional communication; language and speech constructions, which are necessary for the construction of texts (including dialogical) of a professional sphere, as well as for understanding the materials of the scientific and professional sphere; professional vocabulary and terminology necessary for productive communication.

In addition working with the above-mentioned on-line course is aimed at consolidating skills:

- to read adapted medical texts with a high degree of understanding and independence;

- to record information received during reading of the text for the purpose;

- annotate and summarize professional texts;

- possess vocabulary structures and cliches, a wide range of vocabulary of medical terminology necessary for professional communication;

- to make professionally oriented dialogues (medical examination of the patient);

- to make medical messages within the curriculum.

Compulsory educational and methodological support of the course: graphic images, audiovisual

support, presentations, diagrams, tables, algorithms of vocabulary.

Theoretical material should be given in the form of diagrams and tables like «Pay attention», «Remember» etc.

The control of the special on-line course can be accomplished through on-line tests of various types and levels of difficulty. Each task should be evaluated separately. Final control should be exercised after passing the course and obtaining a positive (sufficient) result.

The next stage of preparation of foreign medical students for the professional communication is a work with on-line course «Professional communication: doctor and patient» [2]. This course is included to the educational program of the third year of training specialists in medicine, field of knowledge – 22 «Health care», specialties – 222 «Medicine», professional qualification – «Doctor».

The purpose of this course is to improve the language and communication skills required for foreign students to engage in professional communication. The materials of such course should be tailored to the specific situation of communication – «Interviewing patients with diseases of organs of different systems». For example, if to take the questioning of the patient with diseases of the respiratory system as the basis the educational material can be distributed in such way:

- 1) Communication topics: «Description of the respiratory system and its composition», «Request the information about diseases of the respiratory system», «Request the information about the main symptoms of diseases of the respiratory system», «Modeling a patient's request using different types of questions», «Request information about general complaints, the patient's condition», «Request the information about cough», «Request the information about breathing and pain»;

- 2) Grammar topics: «Grammar workshop on the use of location expressions and composition qualifications», special verbs, structure of general, special and alternative questions;

- 3) Lexical topics: «Respiratory system», «Lungs», «Respiratory diseases», «The main symptoms of respiratory diseases», «Acute bronchitis».

According to the communicative, grammatical and lexical topics it is necessary to distribute the lessons and make a preliminary description of the tasks. It should be noted that the forms of work are similar to the forms in the description of the special on-line course "Introduction to the specialty: scientific speech", but their content is expanding and deepening. So, classes can be divided as follows:

*Topic 1 Respiratory System (2 lessons).*

Lesson 1 (2 hours) "Respiratory system".

Main types and forms of work: presentation of the basic vocabulary of the topic; introduction of vocabulary models for expressing location and qualification in composition; vocabulary; work with the microtext "Respiratory system": reading, question-and-answer exercises, transformation using synonymous constructions.

Lesson 2 (2 hours) Vocabulary work with the text «Lungs».

Main types of work: reading text; question-answer exercises; expressing the location of organs and their classification by composition; test control of topic content: choosing the wrong and correct answers.

*Topic 2. Symptoms of respiratory diseases (6 lessons).*

Lesson 1 (2 hours) Respiratory Diseases.

Main types of work: presentation of the basic vocabulary of the topic; differentiation of the use of the medical verbs in different meanings; language practice.

Lesson 2. (2 hours) «The main symptoms of respiratory diseases»:

Main types of work: presentation of the basic vocabulary of the topic; lexical work with the characteristics of the main symptoms (cough, sputum, breathing, pain); new vocabulary; stylistic antonymic; practical use of some verbs.

Lesson 3 (2 hours). «Modeling a dialog with patient using general, special, and alternative questions».

Main types of work: presentation of types of questions, their forms, intonation centers; a workshop of formulating different types of questions and intoning them; vocabulary with a verbal minimum; nouns for denotation the process; practical grammar.

Lesson 4 (2 hours). «The main symptoms of respiratory diseases».

Main types of work: reading the text; discussing the main symptoms of the disease; question-and-answer exercises (indirect questions, stylistic synonymy); making a dialogue request; text control of understanding the content of the text description.

Lesson 5 (2 hours) Lexical and grammatical practicum of the topic «The main symptoms of respiratory diseases»:

Main types of work: writing the plan of text; lexical and grammatical practicum, modeling of dialogues about symptoms of respiratory diseases.

Lesson 6 (2 hours) A self-control test on the topic «Symptoms of respiratory diseases».

*Topic 3. Main complaints of patients with respiratory diseases (4 lessons)*

Lesson 1 (2 hours) «The main complaints of the patient with respiratory diseases»:

Main types of work: presentation of lexical and grammatical models of questioning of the patient; presentation of vocabulary and grammatical models, the patient's response; complaints of the patient; transformation of oral speech into professional writing.

Lesson 2 (2 hours) «Requesting information about patient's complaints»

Main types of work: lexical work: «Characteristics of cough», «Characteristics of sputum»; presentation of a plan of questioning the patient about the symptoms of the disease (cough and sputum); systematization of questions about symptoms; updating the doctor's questions and the patient's answers; modeling of dialogues; registration the patient's complaints into the patient's card.

Lessons 3, 4 (4 hours). «Request of patient's complaints».

Main types of work: lexical work with text «Characteristics of sputum», «Characteristics of pain»; presentation of the patient's questioning plan about symptoms; sequence of questioning about symptoms; modeling of dialogues; differentiation of patient's complaints and symptoms of diseases;

*Topic 4. Acute bronchitis (2 lessons)*

Lesson 1, 2 (4 hours). «Acute bronchitis».

Main types of work: reading text; drawing up a plan for the text-description «Acute bronchitis»; question-answer exercises (indirect questions, stylistic synonymy); preparation of treatment recommendations; test control of understanding the content of the text; final on-line self-test.

Control (1 lesson)

Lesson 1 (2 hours) "Final test control of the course". Choosing the right answer.

It is assumed that after passing the course students will gain knowledge of about the specifics of professional communication; the necessary linguistic, speech and communicative means of expression processing; formulating different types of questions; making a dialogue about the main complaints of the patient with respiratory diseases; basic lexical minimum of the subject, word formation and stylistic synonyms and opposites; the rules of culture of professional communication of doctors.

In conclusion it is necessary to underline that the independent work of foreign medical students with distance special on-line courses aims to improve the skills of professional communication, expanding the vocabulary, consolidating the knowledge obtained in the classroom practical training.

Conflict of interests. The authors declare no conflict of interest.

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