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FORMATION OF FOREIGN LANGUAGE COMMUNICATION COMPETENCE OF FUTURE MEDICAL SPECIALISTS THROUGH INFORMATION AND COMMUNICATION TECHNOLOGIES (FOREIGN EXPERIENCE)

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ФОРМУВАННЯ ІНШОМОВНОЇ КОМУНІКАТИВНОЇ КОМПЕТЕНТНОСТІ МАЙБУТНІХ СПЕЦІАЛІСТІВ ЛІКУВАЛЬНОЇ СПРАВИ ЗА ДОПОМОГОЮ ІНФОРМАЦІЙНО-КОМУНІКАЦІЙНИХ ТЕХНОЛОГІЙ (ЗАРУБІЖНИЙ ДОСВІД)

Abstract. The paper considers the ways of forming foreign language communication competence of future medical specialists through ICT on the basis of foreign experience. It focuses on five most popular medical universities that, in particular, show high results in terms of medical research, carried out by the students directly: Medical School at Harvard University, School of Medicine at Johns Hopkins University, School of Medicine at New York University, Langone, School of Medicine at Stanford University, School of Medicine at University of California – San Francisco. The paper analyses training programs aimed at the formation of foreign language communication competence of future medical specialists at the above-mentioned Universities: program on the general communication language, "Medical English" distance online courses, professional language for medical students, a particular attention being paid to Michael Mitchel's online distance course in the framework of the Swedish project. Besides, the paper considers the use of ICT means: Moodle, SpeakApps, PowerPoint, and other programs for presentations; online simulators, programs for making tests, questionnaires and games; cloud based services for the organization of foreign language online clubs, etc.

Key words: foreign language communication competence; medical specialist; ICT; training programs; distance courses.

Анотація. У статті розглянуто шляхи формування іншомовної комунікативної компетентності майбутніх спеціалістів лікувальної справи за допомогою інформаційно-комунікаційних технологій на базі зарубіжного досвіду. Приділено увагу п'ятьом найбільш популярним медичним університетам, що, зокрема, мають високі результати щодо медичних досліджень, які про-

...рситеті, Медична школа ...культет Стенфордського університету, Медичний факультет Каліфорнійського університету – Сан-Франциско. У статті проаналізовано навчальні програми, що направлені на формування іншомовної комунікативної компетентності майбутніх спеціалістів лікувальної справи у вищезазначених університетах, такі, як: програма із загальної мови спілкування, дистанційні онлайн-курси «Medical English», професійна мова для студентів лікувальної справи. Окремо приділено увагу дистанційному курсу, створеному Майком Мітчелом у межах шведського проекту. У статті також розглянуто використання засобів ІКТ, таких, як: платформа Moodle; інструменти SpeakApps; PowerPoint та інші програми для створення презентацій; онлайн-симулятори, програми для створення тестів, анкет та ігор; хмарні сервіси для створення онлайн-клубів із вивчення іноземних мов та ін.

Ключові слова: іншомовна комунікативна компетентність; спеціаліст лікувальної справи; ІКТ; навчальні програми; дистанційні курси.

Introduction. Rapid development of information society as well as perfection of information and communication technologies (ICT) requires studying educational means and organization. Distinguished by the scientists among the current methodologies of teaching foreign language to non-philological specialities, e.g. future medical specialists, is a computer oriented one. [5]. This methodology allegedly allows the students to constantly increase their level of foreign language communication competence due to unique ICT functional, namely providing integrity and mobility of teaching foreign languages, actual communication in the professional environment, as well as sources of data obtaining within professional framework that is indispensible for successful existence in the today's information society [1].

The issue of forming foreign language communication competence through ICT is considered by Ukrainian scholars T. Bayeva, R. Gryshkova, L. Kartashova, T. Koval, A. Kolomiyets, O. Semenog, Ye. Spivakovska et al., as well as by foreign scientists J. L. Egbert, G. M. Petrie, W. Jiang, G. Ramsay et al.

In high demand and active use in the information society is a computer-oriented methodology for the formation of foreign language communication competence, particularly in future medical specialists. In this respect, studying the experience of top world universities is of great interest.

The aim – to find out main ways of forming foreign language communication competence of future medical specialists through information and communication technologies, foreign experience taken as a basis.

Methods. General scientific methods and modes have been used: analysis, synthesis, abstraction, comparison, as well as descriptive method including observation, alignment, and generalization.

Results. While ranking the world rating of higher medical educational institutions (universities), provision of educational services for foreign students, perfection of their foreign language professional level, and application of information and communication technologies for the purpose of providing free access, flexibility, and economic efficacy are compulsorily taken into account [4].

In 2019, five most popular medical universities, particularly ranking high in terms of students' medical research, were determined by the experts: 1 – Medical School at Harvard University; 2 – School of Medicine at Johns Hopkins University; 3 – School of Medicine at New York University, Langone; 4 – School of Medicine at Stanford University; 5 – School of Medicine at University of California – San Francisco.

These institutions are commonly involved in the programs of the Association of University Language Centres, AULC: http://www.aulc.org/), University Council of Modern Languages, UCML: https://ucml.ac.uk/), European Confederation of Language Centres in Higher Education, CercleS: http://www.cercles.org/). The membership of the institutions includes schools and foreign language departments at the universities and higher education colleges of many countries, alongside with professional and scientific associations in the fields of modern languages, in particular languages for specific purposes, as well as public and private educational organizations involved in learning, teaching and studying modern languages, linguistics, cultural and territorial linguistic research.

The main goals of above-mentioned centres and associations are: finding positive practice and innovations in learning and teaching foreign languages; resource management and administration; holding regular meetings for discussions and exchange of information on the diverse activity of university linguistic centres; facilitating contacts with university centres at the international level and development of university linguistic centres both inside the university and beyond; monitoring new national and international speech standards, and providing appropriate mechanisms of teaching quality.

The curricula, aimed at the formation of foreign language communication competence of future medical specialists in the above-mentioned universities, centres, and associations are composed in two directions: general language of communication and professional language – Language for Medical Purposes.

General language program is oriented on the Test of English as a Foreign Language, TOEFL, including grammar, vocabulary, reading, writing, and audition.

Professional language for medical students (for example, Oxford University) includes everyday communication in the doctor's practice; human body anatomy and physiology; diagnosis and diseases; wounds and damages; medications; consulting patients and medical staff; examination, diagnosis, prescription, treatment; books and publications on medicine; communication with patients and medical staff.

The programs mentioned above are included into paid online distance university courses, the student receiving the certificate and credits for the tests to follow. For

example, distance online courses "Medical English" (University California, San Diego – https://extension.ucsd.edu/courses-and-programs/medical-english) that focus on the vocabulary and communication, associated with respiratory, locomotor, and endocrine systems. Used at the courses are Interactive Learning), On-Demand Video, real-life scenarios, teachers' consultations, and online tests. The courses are in the social network: Facebook (e.g., https://www.facebook.com/ucsdextlanguages; https://www.facebook.com/UCSDExtensionEAPD/?ref=page_internal etc.); Twitter (e.g., https://twitter.com/UCSDExtEDU) etc. In addition, virtual teacher's rooms are created in the course program for the student to register and get consulted individually on learning a foreign language.

The Oxford University offers medical students four distant courses: "Medicine 1", "Medicine 2", "Nursing 1", "Nursing 2", the courses consisting of three sections, namely: Language spot, Vocabulary, Listening. Each section comprises twelve lessons, which are presented as tests on the grammar and medical problems. For example, "Medicine 1" includes the subjects: Presenting complaints; Working in general practice; Instructions and procedures; Explaining and reassuring; Dealing with medication; Lifestyle; Parents and young children; Communication; Working in psychiatry; Terminal illness and dying; Working in a team; Diversity at work.

Michael Mitchel's online distance course within the Swedish project "English 4 Work" – https://www.english4work.com/) should also be distinguished. "Medical English". The program includes the following activities and resources for each course subject:

– Vocabulary Activity that can be loaded in PDF format;

– Reading Activities: students read and listen to short articles which contain all words and expressions from the electronic dictionary, the dictionary words being underlined and having references in the form of emerging definitions and soundtrack;

– Multiple Choice Activity Test: students get a particular word or phrase from the electronic dictionary and four or more answers to choose the right one. The student may refer to a handbook that will not worsen his mark as a new question will be chosen for him in the test system;

– Spelling & Recognition Activity: students are given definition of a word or a word combination from the dictionary, and they are supposed to write the word or the word combination correctly. Using reference

is allowable like in doing the test "Correct answer choice";

– Listening Comprehension Activity on the basis of audition: students are supposed to listen to the text and answer the questions;

– Speaking Activity: students are supposed to retell a previously recorded text;

– Writing Activity: students are invited to choose one of three questions for discussions and answer (50–200 words), the answers being evaluated in terms of the content, grammar, and orthography.

The course covers the following subjects: "The Human Body" – the student is supposed to master main body parts and to discuss diseases, diagnosis, treatment methods, etc. "Medical Equipment": the student is to study main medical instruments and their application; "At the Hospital": the student is invited to participate in virtual dialogues with patients; "Diagnosis" Part 1: doctors' dialogues on diagnosis; "Diagnosis" Part 2: methods of diagnosis and application of up-to-date technologies are discussed; "Anatomy": students master the basic terms of human anatomic model and of separate organs alongside with discussing diseases which can afflict the organs etc.; "Surgery": students are involved in virtual dialogues during surgical operations and master basic medical terminology, used in surgery etc.; "Routine Check-ups": virtual "student-patient" dialogues; "English for EMT's" Part 1: students are supposed to master vocabulary, associated with emergency medical assistance and to work through possible situations in virtual "doctor-patient" dialogues; "English for EMT's", Part 2: the student is supposed to master and discuss vocabulary, linked to emergency situations of urgent medical help.

Upon completion of the course, the students receive certificate, which can be delivered to potential employers.

Hospital English (http://www.hospitalenglish.com) is another unique electronic distant course for the formation and development of foreign language communication competence of future therapeutic specialists that contain free online materials for the medics, studying medical English, namely electronic dictionaries that, in addition to term articles, provide sound tracks, lesson plans, "doctor-patient" communication models in various situations, flash-cards, tests, etc.

Respecting the wishes of medical department students, Lenka Kučírková, Univerzita Karlova, (2014) [8] developed a Moodle-based electronic training course, providing good assessment of business

English in further testing (https://moodle.czu.cz/course/).

Aside from online distance courses, "Blended learning" or "Mixed methods study" gains a particular importance in the formation of foreign language communication competence of future therapeutic specialists.

The scientists C. D. Dziuban, J. L. Hartman, P. D. Moskal note that "Mixed methods study" should combine conventional auditorium model and Internet web-studies [6]. Mixed study includes combination of distance (electronic) and traditional full-time or correspondent studies according to the capacities of an educational institution; students, teachers; availability of powerful communication lines, as well as cost of access to the Internet, etc. [2].

Asgari Arani J., University of Tehran [3], W. Zhang, C. Han, University in Eastern China [14], N. Milosavljević, A. Vuletić, L. Jovković, University of Niš, Faculty of Medicine, Niš, Serbia [9] et al. deal with the issues of mixed studies in teaching foreign language.

In 2016, Mustafa Naci KAYAOĞLU and Raşide DAĞ AKBAŞ (Karadeniz Technical University, Turkey) questioned 160 medical students, who had been attending medical English course, as to their attitude to various types of learning environment, namely Traditional classroom (Face to face teaching), Blended learning (both face to face and online learning), Online classroom, Synchronous distance learning, and Asynchronous distance learning [7] (Table 1).

Table 1. Results of questioning medical students who attended medical English course as to their attitude towards the types of learning environment

What environment do you prefer in learning English?	Mean value
Traditional classroom	3.56
Blended learning	3.24
Online classroom	2.84
Synchronous distance learning	2.52
Asynchronous distance learning	2.73

The survey was conducted on the Likert scale and the students were supposed to mark among five gradations (from very undesirable (1) to very desirable (5)) the one they correlate with the above-mentioned types of learning environment. According to the inquiry results, students prefer traditional or blended learning. It is indicative of them having some apprehension for online or virtual learning environment. Besides, they are unaware as to how to use ICT for learning

foreign languages and have more confidence in the learning environments with actual communication with teachers.

R. T. Osguthorpe, C. R. Graham [10] distinguish the following reasons for the use of blended learning: perfection of pedagogical approaches, free access to electronic educational resources (EER), social interaction between the participants of the educational process, individual choice of the curriculum, student's control and self-control; reduced cost of the educational process, facilitated repetition of the material studied.

H. Reinders, C. Balcikanli, 2011 distinguish eight stages the teachers should be guided by in using blended learning [11]:

1. Identification of students' needs;
2. Formulation of the goals;
3. Training planning;
4. Choice of resources, in particular EER, according to students' individual choice;
5. Individual choice of learning strategies;
6. Introduction of practice;
7. Feedback-based progress monitoring;
8. Assessment and correction of teaching material, students' speech reflexion and planning of its evaluation.

Students are expected to take responsibility for decision making as to composing individual self-training program, searching for EER and project-based tasks, selecting teachers who would support, direct, correct, and assess them in the educational process.

The table 2 below contains main ICT, used for above-mentioned blended learning course, alongside with the reasons for their choice [12].

Thus, Wiki and forums, web-sites and blogs, Speak Apps and two direction e-portfolios for the feedback with the teacher and for the storage of personal teaching material are the main ICT, distinguished by the scientists for the course based on the blended learning.

Essential for blended foreign language learning are: Electronic encyclopedia A.D.A.M. (for example, Medical Encyclopedia (https://medlineplus.gov/encyclopedia.html) – a big medical encyclopedia that contains more than 4000 papers on diseases, symptoms, traumas, surgical interventions, etc.; online dictionaries (for example, MediLexicon (https://www.medilexicon.com/dictionary) – free online medical dictionary, containing above 100000 medical terms); sites with detailed anatomical models of the human body and separate organs, description of the types of diseases and medical states that lead to the disturbance of nor-

mal organism functioning or occur due to its disorders (for example, site Innerbody (https://www.innerbody.com) – collection of anatomical human body models, organs, blood, etc.).

Table 2. ICT, used for above-mentioned blended learning course, alongside with the reasons for their choice

ICT	Reasons for use	Students' skills formed
Wiki and forums, web-sites and blogs	Students working together to prepare and/or in small groups on the tasks and presentations both in the classroom and beyond	Writing and reading, in small groups and individual
SpeakApps	Practice of extracurricular speech activity	Communication, speech, and audition practice, in groups and individual
e-portfolios 1	To have the page on the individual perfection in any field of the English language, to maintain feedback with the teacher	Individual work on the language perfection in the field of speciality according to the students' needs, extracurricular
e-portfolios 2	To have the page on a student's interests with useful information and references, corresponding to the individual plan and style of study	Extracurricular work and study on all levels of foreign language proficiency

However, the scholars note that the use of computer oriented teaching method solely is unlikely to provide proper level of students' foreign language competence. The method should be combined with traditional face-to-face learning. Another effective step is organizing foreign language clubs where the students discuss different professional problems, scientific papers, topical web-sites, etc.

Conclusions and Prospects for Research. Thus, ICT is intensively used by foreign scientists for the formation of foreign language communication competence in future medical specialists.

It is a common international practice for the foreign language teachers at the universities, in particular medical departments, to make active use of ICT for the formation of future specialists' professional communication competence, namely Moodle, SpeakApps, PowerPoint, and other programs for presentations; online simulators, programs for making tests, questionnaires and games; cloud based services for the organization of foreign language online clubs, etc.

In addition to mentioned above, another essential support for the formation of students' foreign language competence are electronic educational resources, such as electronic dictionaries, reference books, encyclopaedias, scientific libraries, teachers' blogs, social networks, archives of webinars and internet-conferences, forums and their archives, dealing with the discussion of professional issues between students and specialists, etc.

The teachers focus their attention on the organization of distance courses, online testing, electronic educational resources for foreign students with regard to teaching professional foreign languages, development of online simulators for different situations of the paradigm "patient visiting a doctor", discussion of case reports; online laboratories and other types of professional activity that enables to improve proficiency in a foreign language, as well as students' skills.

Besides, the scientists stress an important role of blended learning that makes possible for the students to learn foreign language in the classroom, distantly or online. In the process, the roles of teachers and students are interchanged as teaching becomes student centric. The teachers begin to perform the functions of the organizer, developer, manager, administrator, and promoter for the purpose of maximizing students' activity, initiative, and creativity. Another important aspect for the teachers is to support students in autonomous learning and in feeling responsibility for their study. For their part, the students are supposed to develop special skills for the identification of their own needs, goals; methods of learning and evaluation; to manage their own study, and to reveal ability for self-training.

It is planned to study the state of foreign language communication competence in Ukraine and to work out computer oriented methods of foreign language communication competence development for future medical specialists.

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