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## DEVELOPMENT OF DOCTORS' FOREIGN LANGUAGE PROFESSIONAL COMMUNICATIVE COMPETENCE BY EDUCATION ONLINE RESOURCES

**Abstract.** The article is devoted to the peculiarities of using education online resources, their characteristics, relevance and significance for development of foreign language communicative competence in the professional activity of doctors in an international format. We have analyzed online educational resources as strategic tools for the development of foreign language professional communicative competence of doctors, and as a result, we have provided suggestions for their use in English language training of postgraduate medical students in Shupyk National Healthcare University of Ukraine. The analysis of pedagogical, methodical and special literature on the education online resources in development of doctors' foreign language competence enabled us to single out such education online resources as online courses, tests, immersive technologies, YouTube videos, online dictionaries, digital libraries. We have identified a need to expand support and promotion of less used but potentially useful resources such as specialized language courses and immersion technologies. It is important to organize training and familiarization seminars on the use of immersive technologies in order to raise their popularity among students. Educational videos on YouTube and digital libraries materials can be an important tool for increasing the level of students' foreign language competence. It is necessary to emphasize the availability and usefulness of various Internet resources through constant informational support and counseling students in regard to their use. The analyzed education online resources have a significant potential for developing doctors' foreign language professional communicative competence. These tools develop the professional foreign language communicative competence of doctors due to providing materials in English for professional purposes, making an opportunity to practice communicative skills in various medical situations as well as enabling students to stay aware of current trends in medical research activity worldwide. They motivate doctors to improve their language skills in the medical environment. Our further research will focus on the study of barriers to the implementation of education online resources and the reasons for their limited use in order to offer ways of improving the quality of doctors' foreign language professional communicative competence by suggested education online resources.

**Keywords:** online education resources; foreign language competence; communicative competence of doctors; professional communicative competence; postgraduate education.

### 1. INTRODUCTION

In a rapidly evolving educational environment, technology integration has become a key in shaping effective learning methodologies. In particular, in the field of medical education, more and more attention is paid to developing foreign language competence of doctors, with an emphasis on English as an international language.

Doctors often collaborate with colleagues from different countries on research projects, in clinical trials, and at medical conferences. The proficiency in English facilitates seamless communication and enhances global collaboration.

A significant part of essential medical literature is published in English. The doctors, who have a good command of foreign languages, in particular English as the international language, can have an access to a large repository of scientific papers, journals, and medical textbooks, which allows them to stay abreast of the latest developments in their field. It should be noted

that mastering the English language provides doctors with opportunities for professional development, including the participation in international conferences, the presentation of research results within international environment and postgraduate studying abroad, etc.

Educational online resources (EORs), such as interactive language learning platforms that offer interactive language learning modules tailored to the specific needs of healthcare professionals, online libraries, digital libraries, tests, virtual labs, and others [1]. Doctors can use EORs at their own pace, fitting language learning into their busy schedules. This flexibility allows acquiring a personalized learning experience based on individual learning styles and preferences. Importantly, a number of online resources provide real-time feedback and assessment, allowing doctors to track their progress and identify areas for improvement. An instant feedback accelerates the learning process and contributes to the continuing development of foreign language skills.

Language learning resources also include opportunities to develop intercultural competence, helping doctors navigate cross-cultural interactions with patients, colleagues, and healthcare professionals from diverse backgrounds.

**The problem statement.** Foreign language competence is one of the key competencies of the 21st century that competitive young people must possess. The special role of foreign language competence for Ukrainian citizens is confirmed by a number of state documents, which highlight its importance for an individual's professional career. Among such documents there are Law of Ukraine «On Education» [2], Law of Ukraine «On Higher Education» [3], Ukrainian National Qualifications Framework and etc. Thus, the Ukrainian National Qualifications Framework emphasizes the importance of fluent communication on matters related to the field of scientific and expert knowledge with colleagues, the broader scientific community, and society as a whole, using academic Ukrainian and foreign languages in professional and research activities [4]. In view of the above-mentioned, new demands are being placed on medical professionals by the society. For doctors, the use of a foreign language in their professional activities opens up new opportunities for the continuing professional development, participating in international internships, communicating with foreign colleagues, and mastering new methodologies in clinical protocols, which are standardized documents that define the requirements for diagnostic, therapeutic, preventive, and rehabilitation methods of medical care and their sequences.

The open educational online resources, which allow doctors to learn a professional foreign language to develop their foreign language communicative competence and exchange professional experience with colleagues from other countries, are of particular importance nowadays [5], [6].

#### **Analysis of recent studies and publications.**

Theoretical aspects of doctors' foreign language competence development were studied by such scientists: Logvina S., Sakhno Y., Sivtseva A., Trunchenkova N. [7], Kotsyuba R., Prokop I. [8], Chaari Imen [9], Abdullah Ashraf Hamad, Ibraheem M. Alkhalwaldeh [10], Yelagina, Nataliya & Fedchyshyn, N. [11] etc.

The scientists highlights the need for doctors from different countries to speak English as an international language for communicating with patients, acquiring knowledge in the medical field, participating in international conferences to exchange practical skills, etc.

Of particular importance in teaching a foreign language to doctors are the EORs, which allow them to learn a language at any time regardless of their location. The EORs were the subject to consider by such scientist as Mohammad Usama, Sohaib Alam, Ansa Hameed, Farhan Ahmad, and Sana Iliyas. They focus on the blended learning, that is combining web resources with hands-on classroom activities. The scientists note that online courses are increasingly gaining importance [12].

**The research goal** is to analyze online educational resources as strategic tools for the development of doctors' foreign language professional communicative competence and provide recommendations to use them in teaching English for postgraduate medical students.

## 2. THE THEORETICAL BACKGROUNDS

The communicative competence is one of the components of a person's professional activity. However, in the professional field of activity, communication takes place in a slightly different way than in everyday life due to the frequent use of essential professional terms, professional vocabulary, grammatical categories, etc., regardless of the language used by a specialist at their workplace.

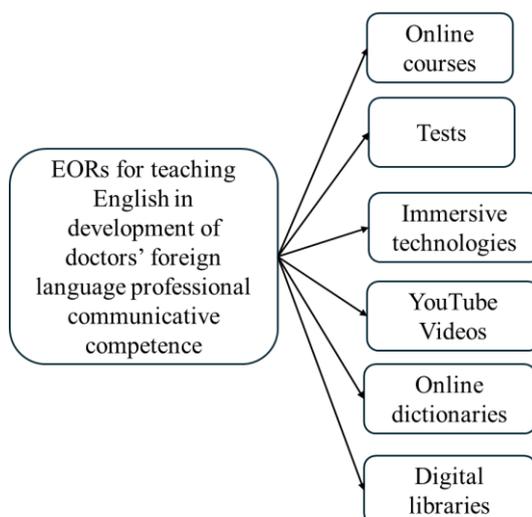
The professional communicative competence is a complex integral formation that combines professional communicative knowledge, abilities, skills and professional qualities ensuring successful communication in the professional sphere.

The concept of “foreign language professional communicative competence”(FLPCC) is interpreted by scientists as a set of knowledge, abilities, skills and experience that were formed in the process of a person’s training in foreign languages and special (subject) terms were used for highly professional, interpersonal, intercultural communication [13], [14]. The result of the effective formation of FLPCC is the ability of a specialist and a professional to use their knowledge of a foreign language skillfully, effectively and appropriately in the process of communication in the relevant field.

EORs are of particular importance in development of FLPCC, that provides individual training for students; regardless the time and location [1].

According to Order No. 749 dated 05/29/2019 “On Amendments to the Regulation on Electronic Educational Resources”, the term of EORs is defined as “educational resources on digital media of any type or placed in information and telecommunication systems, which are reproduced using electronic technical means and used in the educational process” [15].

Among the EORs for FLPCC, scientists single out as follows: online courses [1], [5], [8], test [1], immersive technologies [1], [16], YouTube videos, online dictionaries [11], digital libraries [1] (Fig. 1).



*Fig. 1. EORs for foreign language professional communicative competence*

In their studies, the scientists [1], [5], [8], [11], [16] confirmed the importance of EORs for FLPCC.

### 3. RESEARCH METHODS

Research methods include the analysis of pedagogical, methodical and special literature on the utilization of education online resources in development of doctors' foreign language professional competence; the analysis of pedagogical experience in the use of education online resources in teaching foreign language for postgraduate medical students; the survey of 20 postgraduate medical students of the 2023 – 2024 academic year undergoing PhD training program at the Department of Language Training and Humanitarian Disciplines in Shupyk National Healthcare University of Ukraine regarding awareness of education online resources for learning professional English; the analysis of survey results to highlight relevant resources for development of doctors' foreign language professional communicative competence.

The survey included five blocks describing PhD students' attitude to suggested EORs such as online courses, digital libraries, and online dictionaries, which may help students to improve their language skills.

In addition, we used the Likert scale survey to evaluate the significance of immersive technologies for doctors in learning professional English.

### 4. THE RESULTS AND DISCUSSION

We have analyzed EORs that are freely available and can make a positive impact to developing foreign language competence of doctors.

Let us consider these resources in detail.

Among Online courses, there should be noted such as Anglo-American Center for English and Training (ACET), "English for Medicine and Healthcare" in project "English4Work.com", Specialist Language Courses.

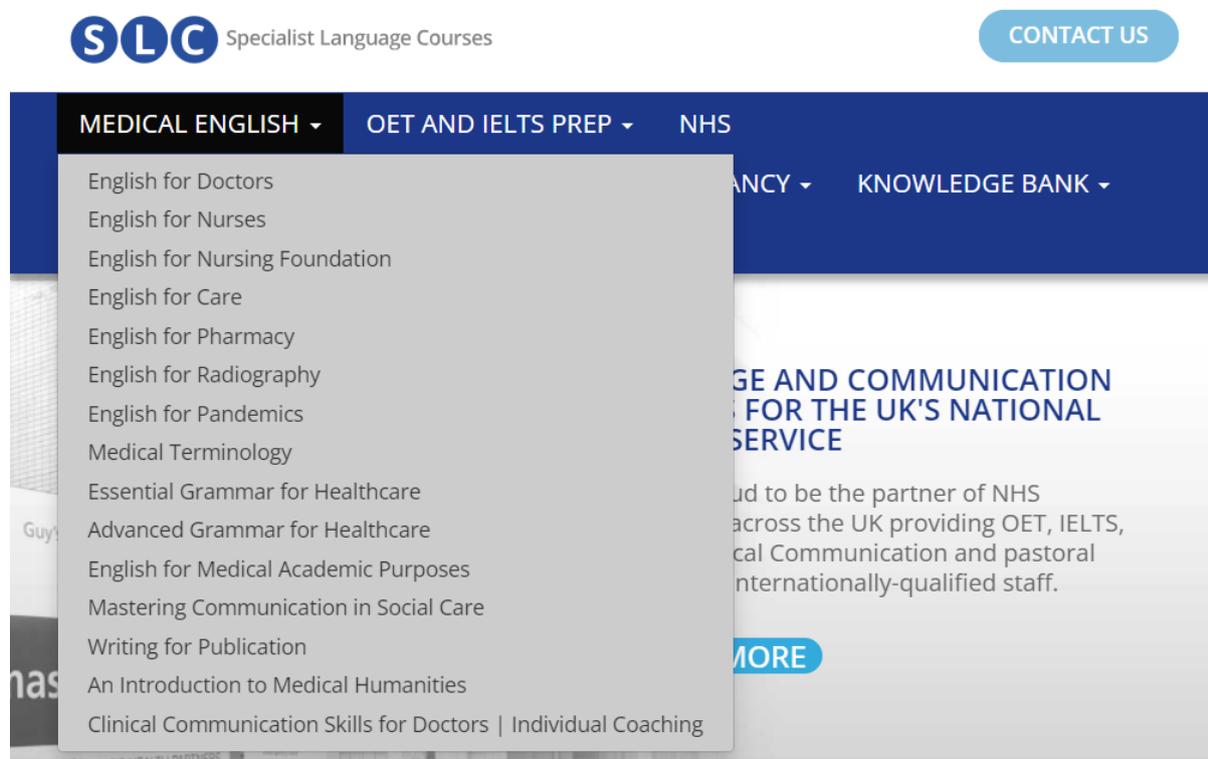
The course of "Anglo-American Center for English and Training (ACET)" [17] is mainly aimed at doctors, interns, nurses and paramedics whose level of English, mainly medical terms and expressions, is elementary. In addition to medical terms, the course focuses on pathology, radiology, surgery, obstetrics, pediatrics, and more. The emphasis is placed on public health issues, public health awareness, speaking at medical conferences, and writing medical reports.

The course of "English for Medicine and Healthcare" in project "English4Work.com" [18] was founded in 2005 by Larry Zoumas, a software engineer and former TOEFL teacher (MSc University of London). The course accommodates learners ranging from intermediate to advanced English levels (B1, B2, C1, and even C2 on the CEFR scale). The platform provides a diverse range of American and British English language exercises, encompassing vocabulary drills, reading tasks, listening comprehension, writing exercises, speaking practice, and others. The course is accredited by the CPD Standards Authority in the UK. Upon completion of the course, students receive an official CPD Standards certificate of 80 hours or CPD points, accepted internationally and across many professional sectors.

The course covers the following units: The Human Body; Medical Equipment; In the Hospital; Diagnosis I; Diagnosis II; Diseases and Illness; Anatomy; Surgery; Mental Health; Dentistry; English For Nursing I; English for Nursing II; English for Nursing III; Routine Checkups; At the Pharmacy; English for EMT's I; English for EMT's II; Elderly Care; Hospital Administration; Medical Slang; ADHD and Asperger's Syndrome; Coronavirus COVID-19; Epidemics; Viruses, and Pandemics. Each unit requires a student to complete the following activities: Vocabulary Activity (students should learn vocabulary units, definitions and example sentences); Reading Activity Plus Questions (students must read the texts and answer the questions); Multiple Choice Exercises (students must choose the correct answer from the list); Listening Comprehension (students have to listen to the word and enter it); Spelling and Recognition (students should enter the correct answer for each definition); Speaking Activity

(students are asked to record how they speak English); Writing Activity (students are encouraged to choose a question and write about it).

Specialist Language Courses [19]—are the distance courses that provides many opportunities for students to learn medical professional English (Fig. 2).



*Fig. 2. The fragment of the site page of Specialist Language Courses, which lists courses for students who want to learn professional English*

These courses can be used by students for self-studying and in blended learning in the classroom.

Online tests are considered quite necessary EORs that allow students to self-test their knowledge of the English language and give them the opportunity to correct their speech errors.

The Occupational English Test (OET) [20] is accepted as a proof of English proficiency by a number of private and public organizations and institutions in eight countries. OET is the world's only international English language exam designed specifically for healthcare professionals. The test assesses the communication skills of healthcare professionals seeking to register and practice in an English-speaking environment. OET results are accepted worldwide. It is a valuable resource for researchers, educators, and students, offering insights into the effectiveness of testing for developing doctors' foreign language professional communicative competence.

EF Standard English Test (EF SET) [21] is one of the major English tests in the world measuring reading and speaking skills designed predominantly for non-native English speakers and used by adults for professional English certification purposes. Published annually, the EF English Proficiency Index (EF EPI) is an important international benchmark for adults to check their level of English. EF SET PLUS scores are as reliable as TOEFL and IELTS scores. On the site, everyone has a free access to take the tests and obtain their results assessed (Fig. 3).

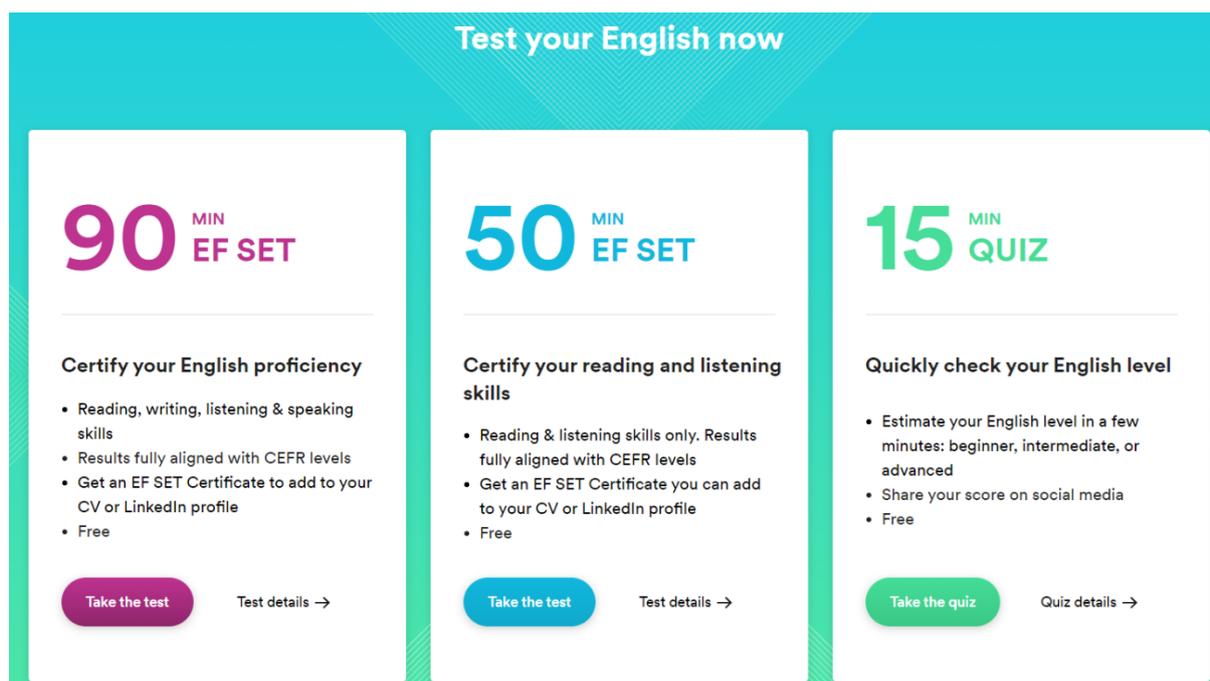


Fig. 3. The fragment of the site page of EF SET, where everyone is invited to take a test

Online language tests offer an accessible platform for doctors to assess and enhance their proficiency in foreign languages. These tests are designed to evaluate various aspects of language skills, including listening, speaking, reading, and writing. By identifying specific areas of their language weakness, medical professionals can focus their efforts on improving particular language competencies, leading to a more balanced and comprehensive linguistic ability. They offer a practical, flexible, and efficient way to enhance language skills, tailored to the specific needs of the healthcare environment.

It should also be noted the uniqueness of such EORs as Immersive technologies (virtual and augmented reality, VR, AR) for teaching English to develop doctors' foreign language professional communicative competence, for example: Mursion, Touch Surgery, InSpaceXR, Osso VR, ImmersiveTouch, VRHealth, Oxford Medical Simulation, LanguaMetrics VR, Athena.

Let us consider the purposes of these platforms and ways of using immersive technologies by doctors to develop their foreign language competence.

Mursion is a virtual reality platform for training communication skills. For doctors, it can be used as a simulation of doctors and virtual patients' interaction for improving their language and interpersonal skills in clinical scenarios.

Touch Surgery is an augmented reality for training medical procedures, which provides the possibility for doctors of various medical professions to learn medical terminology in English.

In SpaceXR is a virtual platform for remote collaboration and learning, which gives the opportunity for doctors to interact virtually, discussing clinical cases and consulting in a foreign language format.

Osso VR is a virtual reality for training orthopedic surgical procedures where doctors can practice their language skills during surgical procedures simulation.

ImmersiveTouch is a virtual reality for planning and performing surgical procedures where doctors can interact with virtual models and discuss the treatment plan in a foreign language environment.

VRHealth is a virtual reality platform for medical monitoring and rehabilitation, where doctors can communicate with patients, conduct medical monitoring and provide instructions in a foreign language format.

Oxford Medical Simulation is a virtual reality for medical training and simulation of clinical scenarios in which doctors interact virtually with patients, improving their language skills and solving language challenges in real clinical settings.

LanguaMetrics VR is a language learning platform from Mondly that can be used by doctors to learn medical terminology and develop speaking skills.

Athena is a medical English learning platform where doctors can learn specific terms and expressions used in medical communication during interactive virtual scenarios.

These tools not only develop the doctors' foreign language professional communicative competence, but also provide an opportunity to practice communication skills in medical situations. They contribute to immersive learning and an effective improvement of language skills in a medical environment.

It should be noted that the use of dictionaries plays a crucial role in the development of doctors' foreign language professional communicative [22], [23].

We use the following online dictionaries for teaching English to students: MedlinePlus [24], Cambridge Dictionary +Plus [25].

MedlinePlus is an online health information resource for doctors, nurses and patients. It is a service of the National Library of Medicine (NLM), the world's largest medical library, which is the part of the National Institutes of Health (NIH). This online dictionary covers the following parts:

- “Drugs, Herbs and Supplements” where are described side effects, dosages, special precautions, and other things;
- “Genetics” (more than 1,300 genetic conditions, 1,400 genes, each of the 23 pairs of human chromosomes, and mitochondrial DNA (mtDNA)) that includes information about the effects of genetic variation on human health;
- “Medical tests” (nearly 300 medical tests) contains information about existing medical tests, their purpose and the meaning of their results;
- “Medical Encyclopedia” that includes over 4,000 articles about diseases, tests, symptoms, injuries, and surgeries. It also contains an extensive library of medical photographs and illustrations.

Medscape [26] offers a collection of videos, definitions of medical terms and an explanation of the situations to be used by doctors.

Cambridge Dictionary +Plus offers, in addition to defining terminology, games, quests and tests.

Digital libraries are important EORs, which provide students with the opportunity to get acquainted with scientific publications, current topics in medicine, etc., motivating them to learn English, enabling them to write articles in the international library space. Among such libraries, we can mention Michigan State University Libraries (MSU), Health Sciences Digital Library.

In order to highlight a significance of EORs for teaching English in the development of doctors' foreign language professional communicative competence and to understand the awareness of doctors regarding the above-mentioned online resources, we conducted a questionnaire among postgraduate medical students in Shupyk National Healthcare University of Ukraine (20 PhD students of the 2023 – 2024 academic year). The result of students' responses to the questionnaire is presented in Table 1.

Table 1

**The result of postgraduate students' responses to the questionnaire**

<b>I use the following online educational resources to improve my foreign language professional communicative competence</b>	<b>Yes (a number of respondents/%)</b>	<b>No (a number of respondents/%)</b>	<b>Suggestions</b>
<b>1. Online courses</b>			
1.1. English for medicine and health care <a href="https://www.medicalenglish.com/">https://www.medicalenglish.com/</a>	11/55%	9/45%	I would like to use it
1.2. Anglo- American Center for English and Training (ACET) <a href="https://aacentre.co.uk/courses/english-for-medical-purposes/">https://aacentre.co.uk/courses/english-for-medical-purposes/</a>	-	20/100%	I would like to use it
1.3. Duolingo	9/45%	11/55%	No comments
1.4. Specialist language courses <a href="https://specialistlanguagecourses.com/">https://specialistlanguagecourses.com/</a>	3/15%	17/85%	I would like to use it
Other			
<b>2. Immersive technologies (VR, AR, MR)</b>			
2.1. Mursion	-	20/100%	No comments
2.2. Touch Surgery	-	20/100%	No comments
2.3. InSpaceXR	-	20/100%	No comments
2.4. Osso VR	-	20/100%	No comments
2.5. VRHealth	-	20/100%	It can be useful for me
2.6. Oxford Medical Simulation	8/40%	12/60%	No comments
2.7. LanguaMetrics VR	-	20/100%	It can be useful for me
2.8. Athena	-	20/100%	No comments
<b>3. Tests</b>			
3.1. Occupational English Test (OET)	17/85%	3/15%	No comments
3.2. EF Standard English Test (EF SET)	4/20%	16/80%	No comments
3.3. Test of English as a Foreign Language (TOEFL)	14/70%	6/30%	No comments
3.4. International English Language Testing System (IELTS)	12/60%	8/40%	No comments
<b>4. Online dictionaries</b>			
4.1. Cambridge Dictionary +Plus <a href="https://dictionary.cambridge.org/plus/">https://dictionary.cambridge.org/plus/</a>	10/50%	10/50%	I would like to use this online dictionary
4.2. MedlinePlus	17/85%	3/15%	National Library of Medicine has other components of different medical spheres
4.3. Medscape <a href="https://emedicine.medscape.com/">https://emedicine.medscape.com/</a>	17/85%	3/15%	No comments
Other			Merriam Webster Dictionary (General English)
<b>5. Digital libraries</b>			
5.1. Michigan State University Libraries (MSU) Health Sciences Digital Library <a href="https://lib.msu.edu/">https://lib.msu.edu/</a>	12/60%	8/40%	No comments
5.2.	12/60%	8/40%	No comments
Other			National Library of Medicine
6. YouTube Videos	20/100%		Osmosis from Elsevier <a href="https://www.youtube.com/@osmosis">https://www.youtube.com/@osmosis</a> To The Point English with Ben (General English) <a href="https://www.youtube.com/@tothepointenglishwithben">https://www.youtube.com/@tothepointenglishwithben</a> .

The table presents data on how respondents use different online educational resources to improve their professional foreign language communication skills. It categorizes responses into “Yes” (those who use the resource), “No” (those who do not use it), and suggestions whether respondents are interested in using the resource in the future. The questionnaire results on the use of online resources to improve doctor’s FLPCC indicate a different level of popularity,

acceptability and awareness of doctors regarding EORs. Below we analyse key findings for each category given in Table 1.

“English for Medicine and Health Care” (55% use it, 45% do not) – this course has moderate adoption among respondents, indicating some familiarity and perceived usefulness.

“Anglo-American Center for English and Training (ACET)” (0% use it, 100% do not, but interested in using it) – a completely unused resource, though respondents show interest, suggesting low awareness but potential future demand.

“Duolingo” (45% use it, 55% do not) – despite being a popular general language-learning tool, its adoption is relatively low among these respondents, likely due to its limited professional English focus.

“Specialist Language Courses” (15% use it, 85% do not) – a highly specialized resource that very few respondents have used, but some show interest.

Thus, respondents show interest in specialized medical English courses, but some options are not widely known or used. General tools such as Duolingo have limited application in a professional context.

Most platforms (Mursion, Touch Surgery, InSpaceXR, Osso VR, LanguaMetrics VR, Athena) are not used at all (100% No responses).

Oxford Medical Simulation (40% use it, 60% do not) – this is the only immersive platform with some level of adoption.

VRHealth and LanguaMetrics VR are considered potentially useful, though not yet used.

Immersive technologies are not yet widely adopted, likely due to limited access, high costs, or lack of awareness. However, some respondents express interest in using them, showing potential for future growth.

Occupational English Test (OET) (85% use it, 15% do not) – the most widely used test, likely due to its relevance in professional settings.

TOEFL (70% use it, 30% do not) & IELTS (60% use it, 40% do not) – both widely recognized general English proficiency tests have high but not universal adoption.

EF SET (20% use it, 80% do not) – the least used test, possibly because it is less widely required in professional certification.

Thus, profession-specific tests (OET) are preferred over general English proficiency tests like IELTS and TOEFL.

Cambridge Dictionary (50% use it, 50% do not) – a general English dictionary with moderate adoption.

MedlinePlus & Medscape (85% use them, 15% do not) – these medical dictionaries have the highest adoption rates, indicating their strong relevance in professional communication.

Medical dictionaries are essential tools, whereas general dictionaries have lower adoption rates.

Michigan State University (MSU) Health Sciences Digital Library (60% use it, 40% do not) – moderately used, likely due to accessibility constraints.

National Library of Medicine is listed as another preferred resource.

Digital libraries are important for academic research, but usage varies based on accessibility.

100% of respondents use YouTube videos for learning.

Respondents identify the following preferred channels: Osmos by Elsevier (medical content); To The Point English with Ben (general English).

Thus, YouTube is a universal learning tool, showing that video-based learning is highly accessible and effective.

Based on the results of the students’ survey, we can draw the following general conclusions and recommendations.

Support and Promotion of EORs is important to promote less used but potentially useful online resources such as ACET and Specialist Language Courses, as well as immersive technologies.

Trainings and familiarization seminars are necessary to popularize immersive technologies and their integration into the educational process.

Some resources, such as Cambridge Dictionary +Plus and Oxford Medical Simulation, need more support to ensure a consistent use among students.

Educational videos on YouTube are an important tool for improving students' foreign language competence and should be integrated into curricula.

The results of the students' survey on the use of online resources to improve foreign language professional communicative competence show the following trends and opportunities for improvement.

The courses of "English for Medicine and Health Care" and "Duolingo" are very popular, which indicates their effectiveness and acceptability among students.

The low level of using immersive technologies among students signals the need for more familiarization and training on these tools. Many students realize the potential usefulness of technologies such as VR Health and LanguaMetrics VR for developing medical skills and foreign language communicative competence.

In this regard, additionally we conducted the Likert scale survey to evaluate the significance of immersive technologies for doctors in learning professional English (Table 2).

*Table 2*

**Results of the survey of respondents according to the Likert scale**

Platform	Score 5	Score 4	Score 3	Score 2	Score 1
Murcia	0	0	3 (35%)	0	13 (65%)
Touch Surgery	0	8 (40%)	10 (50%)	2 (10%)	0
InSpaceXR	13 (65%)	7 (35%)	0	0	0
Osso VR	9 (45%)	0	2 (10%)	3 (15%)	6 (30%)
Lingrafia	0	10 (50%)	2 (10%)	3 (15%)	6 (30%)
VR Health	9 (45%)	0	2 (10%)	3 (15%)	6 (30%)
Oxford Medical Simulation	9 (45%)	0	2 (10%)	3 (15%)	6 (30%)
LanguaMetrics VR	0	0	7 (35%)	0	13 (65%)
Athena	10 (50%)	0	2 (10%)	3 (15%)	6 (30%)

Based on the obtained results, the following conclusions can be drawn. The highest rating (5 points) was most frequently given to Osso VR, VR Health, Oxford Medical Simulation, and Athena:

- Osso VR, VR Health, Oxford Medical Simulation, Athena – 45-50% of respondents rated them 5 points, indicating their high efficiency and alignment with user expectations;
- These platforms offer interactive features, including realistic simulations and practical tasks, making them well-suited for training in medicine and other professional fields. InSpaceXR received the highest level of support in the 5-point category (65%):
- This suggests that this platform provides very high-quality content and a high level of user satisfaction;
- It is likely that it offers the most immersive user experience among the platforms. Touch Surgery and Lingrafia received balanced ratings but fewer 5-point scores:
- Touch Surgery: 40% gave it 4 points, 50% – 3 points, indicating good but not perfect platform quality;

- Lingrafia: 50% gave it 4 points, 10% – 3 points, 30% – 1 point, which may indicate some shortcomings or limited adaptability to user needs.

Murcia and LanguaMetrics VR received the lowest ratings:

- Murcia: 65% of respondents rated it 1 point, while 35% gave it 3 points. This suggests that the platform likely did not meet expectations or had significant limitations;
- LanguaMetrics VR: 65% gave it 1 point, 35% – 3 points, which also indicates a low level of user satisfaction.

The OET and TOEFL tests are considered the most popular ones among students, suggesting their importance for professional development.

There is a scope to increase the use of EF SET and IELTS tests, which require additional information and support for students.

MedlinePlus and Medscape are the most popular online dictionaries among students, revealing their importance in the medical field.

The Cambridge Dictionary has a balanced use, indicating the need for an even distribution of this resource.

The Michigan State University Health Sciences Digital Library is widely used, underscoring its importance to students.

Educational YouTube channels such as Osmosis from Elsevier and «To the Point English with Ben» are particularly popular with students. This indicates a demand on a wider implementation of such resources in educational programs.

Therefore, there is a need to expand the support and promotion of less used but potentially useful resources such as Specialist Language Courses and immersive technologies.

It is important to organize trainings and familiarization seminars on the use of immersive technologies in order to increase their acceptance among students. YouTube educational videos can be an important tool for improving students' foreign language competence. It is necessary to integrate these resources into educational programs.

The availability and usefulness of various online resources through constant informational support and counseling of students regarding their use should be emphasized.

## 5. CONCLUSIONS AND PROSPECTS FOR FURTHER RESEARCH

Therefore, our analysis of the education online resources shows a significant potential for using EORs in the development of doctors' foreign language professional communicative competence. These resources include the online courses, tests, immersive technologies, YouTube videos, online dictionaries, digital libraries. The described information tools develop the professional foreign language communicative competence of doctors, as they offer educational materials in English for professional purposes, providing an opportunity to practice communication skills in medical situations and acquire a knowledge of current trends in medical research worldwide. They motivate doctors to improve their language skills for the effective cooperation in the medical environment.

The results of the survey of doctors gave us reason to draw the following conclusions: doctors are interested in using digital technologies to develop professional competencies and foreign language communicative competence. In view of this, we developed a course plan for the prospective implementation of electronic educational resources in the teaching of English professional language to doctors:

Module 1: Introduction to Online Language Learning for Medical Professionals

1.1. Overview of Foreign Language Communication in Medicine

- Importance in global healthcare contexts.
- Challenges in professional communication.

## 1.2. Online Education Resources: Trends and Opportunities

- Types of platforms (MOOCs, language apps, webinars).
- Integration with medical training.

### Module 2: Identifying and Using Online Resources

#### 2.1. Selection of Appropriate Resources

- Criteria for evaluating medical language resources.
- Reputable platforms: MedlinePlus, PubMed, Duolingo for medical terms, and others.

#### 2.2. Tools for Listening and Speaking Skills

- Virtual simulations (telemedicine dialogues).
- Pronunciation guides (Forvo, Speechify).

### Module 3: Enhancing Reading and Writing Competence

#### 3.1. Medical Terminology in Context

- Interactive glossaries and dictionaries (Stedman's, Taber's).
- Practice with medical research articles.

#### 3.2. Writing Professional Documents

- Emails, case reports, and research abstracts.
- Grammarly and other editing tools tailored to medical contexts.

### Module 4: Collaborative Learning Strategies

#### 4.1. Using Online Discussion Forums and Peer Networks

- Language exchange communities for doctors.
- Role-playing scenarios in forums or group video calls.

#### 4.2. Gamification in Medical Language Learning

- Apps and games that teach terminology in an engaging way.

### Module 5: Integrating AI and Advanced Technologies

#### 5.1. AI-based Tools for Language Mastery

- ChatGPT, DeepL for language refinement.
- AI simulations for clinical communication.

#### 5.2. Virtual Reality in Language Learning

- Immersive experiences in medical settings.
- Case-based problem-solving in VR environments

### Module 6: Assessing and Sustaining Language Competence

#### 6.1. Methods for Self-Assessment

- Online proficiency tests for medical English (OET, TOEFL).
- Tracking progress through apps and courses.

#### 6.2. Building a Sustainable Learning Plan

- Incorporating daily practice into professional life.
- Using journals and logs to reflect on progress.

### Final Project

- Creating a Professional Language Portfolio
  - Compilation of learning outcomes, presentations, and case reports.
  - Simulation of a telemedicine consultation in a foreign language.

### Assessment and Certification

- Online quizzes and tests for each module.
- Certification upon course completion, endorsed by medical and educational institutions.

Our further research will focus on the study of barriers to the implementation of EORs and the reasons for their limited application in order to offer ways for improving the quality of doctors' foreign language professional communicative competence by using suggested EORs.

**REFERENCES (TRANSLATED AND TRANSLITERATED)**

- [1] S. Saud, M. Basri, R. Ramly, A. Abduh, A. Patak, "Using Online Resources Technology for Foreign Language Learning: Strategies, Impact, and Challenges", *International Journal on Advanced Science, Engineering and Information Technology*. 2020, 10. 1504. Doi: 10.18517/ijaseit.10.4.11838. (in English)
- [2] Verkhovna Rada of Ukraine, On Education, 2017. [Online]. Available: <https://zakon.rada.gov.ua/laws/show/2145-19/page?lang=en>. Accessed on: January 19, 2025. (in Ukrainian)
- [3] Verkhovna Rada of Ukraine, On Higher Education, 2017. [Online]. Available: <https://zakon.rada.gov.ua/laws/show/1556-18#top>. Accessed on: January 19, 2025. (in Ukrainian)
- [4] European Commission, "Report on the comparison of the European Qualifications Framework and the Ukrainian National Qualifications Framework", 2023. [Online]. Available: <https://europass.europa.eu/system/files/2023-02/Comparison%20report%20final%20rev%2023-02-2023%20UA.pdf>. (in Ukrainian)
- [5] S. Bećirović, A. Brdarević-Čeljo, H. Delić, "The use of digital technology in foreign language learning", *SN Soc Sci* 1, 246, 2021. <https://doi.org/10.1007/s43545-021-00254-y>. (in English)
- [6] F. Vahdany, L. Gerivani, "An Analysis of the English Language Needs of Medical Students And General Practitioners: A Case Study Of Guilan University of Medical Sciences", *International Journal of English Language and Literature Studies*. 5(2): 104-110, 2016. Available: [https://api.semanticscholar.org/CorpusID:75432072\\_c](https://api.semanticscholar.org/CorpusID:75432072_c). (in English)
- [7] S. Logvina, Y. Sakhno, A. Sivtseva, N. Trunchenkova, "Forming Foreign Language Communicative Competence At Medical Universities: Theory And Methodology", In O. D. Shipunova, & D. S. Bylieva (Eds.), *Professional Culture of the Specialist of the Future & Communicative Strategies of Information Society, European Proceedings of Social and Behavioural Sciences, European Publisher*. 98, 553-561, 2020. <https://doi.org/10.15405/epsbs.2020.12.03.55>. (in English)
- [8] R. Kotsyuba, I. Prokop, "Formation of foreign language communication competence of future medical specialists through information and communication technologies (foreign experience)", *Medical education*, 2020, 80-86. 10.11603/me.2414-5998.2020.2.11153. (in English)
- [9] I. Chaari, "English for Medical Purposes: The Need for the Application of a Hybrid-Teaching Environment in Tunisian Medical Institutions", *International Journal of Linguistics and Translation Studies*, 2024, 5. 125-132. 10.36892/ijlts.v5i2.424. (in English)
- [10] A. H. Abdullah, M.A. Ibraheem, "Lost in translation: The impact of foreign language reliance in medicine on public health", *Medical Reports*, Volume 3, 100039, 2024. <https://doi.org/10.1016/j.hmedic.2024.100039>. (in English)
- [11] N. Yelagina, N. Fedchyshyn, "Methods of learning professional English vocabulary by medical students", *Medical education*. 106-112, 2021. 10.11603/m.2414-5998.2021.3.12609. (in English)
- [12] U. Mohammad, A. Sohaib, H. Ansa, A. Farhan, I. Sana, "Web-Based Vs. Mixed Mode Instruction Utilizing E-Learning via LMS: A Comparative Study", *International Journal of Information and Education Technology*, Vol. 14, No. 4, 2024. Available: <https://www.ijet.org/vol14/IJiet-V14N4-2084.pdf>. (in English)
- [13] O. Dudina, L. Strelchenko, A. Dudin, "Development of Communication Competence in Foreign Medical Students at English for Careers Classes", *Revista Romaneasca Pentru Educatie Multidimensionala*, 14(1), 339-355, 2022. <https://doi.org/10.18662/rrem/14.1/522>. (in English)
- [14] M.V. Podolyak, "Analysis of the concept of foreign language professional communicative competence in the domestic and foreign scientific space". *Academic studies. "Pedagogy" series*, (4), 36-44, 2023. <https://doi.org/10.52726/as.pedagogy/2022.4.6> (in Ukrainian).
- [15] Ministry of Education and Science of Ukraine, Order No. 749, On amendments to the Regulations on electronic educational resources, 2019 [Online]. Available: <https://ips.ligazakon.net/document/view/Re33637?an=85> (in Ukrainian).
- [16] O. Gayevska, N. Soroko, "The pedagogical strategies with immersive technologies for teaching and learning the Japanese language", *Information Technologies and Learning Tools*, 92(6), 99–110, 2022. <https://doi.org/10.33407/itlt.v92i6.5133>. (in English)
- [17] Anglo-American Center for English and Training (ACET). (2025). "English for Medical Purpose". [Online]. Available: <https://acentre.co.uk/courses/english-for-medical-purposes/>. Accessed on: January 19, 2025. (in English)
- [18] English4Work. (2025). "English for Medicine and Healthcare". [Online]. Available: <https://www.medicalenglish.com/>. Accessed on: January 29, 2025. (in English)
- [19] Specialist Language Courses. (2025). [Online]. Available: <https://specialistlanguagecourses.com/>. Accessed on: January 29, 2025. (in English)

- [20] The Occupational English Test (OET). (2025). [Online]. Available: <https://oet.com/> Accessed on: January 29, 2025. (in English)
- [21] EF Standard English Test (EF SET). (2025). [Online]. Available: <https://www.efset.org/> Accessed on: January 29, 2025 (in English)
- [22] L. Desnaranti, F.P. Putra, W. Utama, "The Analysis of Digital English Dictionary Used by Non-English Major Undergraduate Students", *Acitya: Journal of Teaching and Education*, 4(1), 215–228, 2022. <https://doi.org/10.30650/ajte.v4i1.3217>. (in English)
- [23] F. Balázs, B. Mátyás, P.M. Katalin, "The Interrelationship between EFL Learning Motivation and Dictionary Use", *International Journal of Lexicography*. ecad028, 2023. <https://doi.org/10.1093/ijl/ecad028>. (in English)
- [24] MedlinePlus. (2025). [Online]. Available: <https://medlineplus.gov/> Accessed on: January 29, 2025. (in English)
- [25] Cambridge Dictionary +Plus. (2025). [Online]. Available: <https://dictionary.cambridge.org/plus/> Accessed on: January 29, 2025. (in English)
- [26] Medscape. (2025). [Online]. Available: <https://emedicine.medscape.com>. Accessed on: January 29, 2025. (in English)

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## РОЗВИТОК ІНШОМОВНОЇ ПРОФЕСІЙНОЇ КОМУНІКАТИВНОЇ КОМПЕТЕНТНОСТІ ЛІКАРІВ ЗА ДОПОМОГОЮ ОСВІТНІХ ОНЛАЙН-РЕСУРСІВ

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**Анотація.** Стаття присвячена особливостям використання освітніх онлайн-ресурсів, їх характеристики, актуальності та значенню для розвитку іншомовної комунікативної компетентності в професійній діяльності лікарів у міжнародному форматі. Ми проаналізували освітні онлайн-ресурси як стратегічні інструменти розвитку іншомовної професійної комунікативної компетентності лікарів, у результаті чого надали пропозиції щодо їх використання під час навчання англійської мови для аспірантів-медиків Національного університету охорони здоров'я України імені П. Л. Шупика. Аналіз педагогічної, методичної та спеціальної літератури щодо використання освітніх онлайн-ресурсів у розвитку іншомовної компетентності лікарів дав змогу виділити такі освітні онлайн-ресурси, як онлайн-курси, тести, імерсивні технології, YouTube-відео, онлайн-словники, електронні бібліотеки. Ми виявили потребу в розширенні підтримки та просуванні менш використовуваних, але потенційно корисних ресурсів, таких як спеціалізовані мовні курси та технології занурення. Важливо організувати тренінги та ознайомчі семінари щодо використання імерсивних технологій з метою підвищення їх популярності серед студентів. Важливим інструментом для підвищення рівня іншомовної комунікативної компетентності студентів у професійній діяльності можуть стати навчальні відео на YouTube та матеріали цифрових бібліотек. Необхідно акцентувати увагу на доступності та корисності різноманітних Інтернет-ресурсів через постійну інформаційну підтримку та консультування студентів щодо їх використання. Проаналізовані нами освітні онлайн-ресурси мають значний потенціал для розвитку іншомовної професійної комунікативної компетентності лікарів. Ці інструменти розвивають іншомовну професійну комунікативну компетентність лікарів, оскільки пропонують матеріал англійською мовою для професійних цілей, дають можливість практикувати навички спілкування в медичних ситуаціях і бути в курсі сучасних тенденцій медичних досліджень у всьому світі. Вони мотивують лікарів до ефективного вдосконалення мовних навичок у медичному середовищі. Наші подальші дослідження будуть зосереджені на вивченні бар'єрів у впровадженні освітніх онлайн-ресурсів з метою кращого розуміння та усунення причин їх обмеженого використання, а також підвищення якості формування іншомовної професійної комунікативної компетентності лікарів.

**Ключові слова:** освітні онлайн-ресурси; іншомовна компетентність; комунікативна компетентність лікарів; професійна комунікативна компетентність; післядипломна освіта.



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