

DOI: <https://doi.org/10.34069/AI/2023.65.05.17>

How to Cite:

Karhut, V., Semenog, O., Shumiatska, O., Palamar, N., & Rubliova, N. (2023). The need for new information technologies during foreign language learning for the quality training of a specialist. *Amazonia Investiga*, 12(65), 175-184. <https://doi.org/10.34069/AI/2023.65.05.17>

The need for new information technologies during foreign language learning for the quality training of a specialist

Необхідність нових інформаційних технологій при вивченні іноземної мови для якісної підготовки фахівця

Received: April 19, 2023

Accepted: May 28, 2023

Written by:

Volodymyr Karhut¹<https://orcid.org/0009-0004-9449-6517>

ResearcherID: IUQ-2922-2023

Olena Semenog²<https://orcid.org/0000-0002-8697-8602>

ResearcherID: E-2994-2018

Oleksandra Shumiatska³<https://orcid.org/0000-0002-9969-3673>

ResearcherID: IVH-7068-2023

Nataliia Palamar⁴<https://orcid.org/0009-0001-2337-8714>

ResearcherID: IVH-7026-2023

Natalia Rubliova⁵<https://orcid.org/0000-0001-8341-7095>

ResearcherID: IVH-6886-2023

Abstract

New information technologies for learning a foreign language, which are necessary for the high-quality training of a specialist, have been analyzed. The goal of informatization of education is determined, and it is shown as a priority and necessary direction of informatization of society, which has a mandatory priority of applying new information technologies in the education system. Information technologies, improve the study of a foreign language, provide an opportunity for deep and rapid assimilation of vocabulary, learning to write, clarity of pronunciation, dialogic and monologic speech, and improvement of grammatical structures. The peculiarities of distance learning when learning a foreign language are determined. When learning

Анотація

Проаналізовано нові інформаційні технології при вивченні іноземної мови, що необхідні для якісної підготовки фахівця. Визначено мету інформатизації освіти, показано її як пріоритетний і необхідний напрям інформатизації суспільства, що має обов'язковим пріоритетом застосування нових інформаційних технологій у систему освіти. Інформаційні технології, удосконалюючи вивчення іноземної мови, надають можливість для глибокого і швидкого засвоєння лексики, навчання письма, чіткості вимови, діалогічного та монологічного мовлення, удосконалення граматичних структур. Визначено особливості дистанційного навчання при вивченні іноземної мови. Під час навчання іноземної мови обов'язковим елементом її якісного

¹ Candidate of Pedagogical Sciences, Full-time Associate Professor, Associate Professor of the Department of Computer and Software Engineering, Dragomanov Ukrainian State University, Ukraine.

² Doctor of Pedagogical Sciences, Professor, Head of the Chair of Ukrainian Language and Literature, Sumy State Pedagogical University named after A. S. Makarenko, Ukraine.

³ PhD of Philological Sciences, Associate Professor, Professor of the Department of Intercultural Communication and Translation, Ivan Franko National University of Lviv, Ukraine.

⁴ PhD of Philological Sciences, Associate Professor, Professor of the Department of Intercultural Communication and Translation, Ivan Franko National University of Lviv, Ukraine.

⁵ Deputy Director for Educational and Pedagogical and Educational Project Activities, Volyn In-Service Teachers Training Institute, Ukraine.

a foreign language, a mandatory element of its quality study is the use of telecommunication technologies in the educational process. The most powerful and effective elements of information and computer technologies during education, essential innovative technologies in the methodology of teaching foreign languages, which should be used by students in higher education, are singled out. For teaching a foreign language, in general, and for stimulating the cognitive activity of students, in particular, it is necessary to use digital tools. Examples of the most important ones are given and recommendations on methods of working with them are offered.

Keywords: new information technologies, foreign language learning, quality training, education seekers, higher school.

Introduction

The application of international academic programs and projects in the world talks about competitive specialists who speak a foreign language fluently not only at the everyday level but also at the professional level. Therefore, to increase the opportunities of the educational sector and the quality of education, we consider it necessary to carry out a fundamental review of the content and technologies of training specialists, with the primary goal being the development of an independent, active, and creative individual (Reida et al., 2020).

Digital education in today's rapidly developing world provides an opportunity to improve the educational process and use the latest learning technologies with the help of special gadgets and programs.

Today, higher education offers new approaches to the qualitative organization of the educational process when learning a foreign language, which has become possible with the development of information technologies. The possibility of the latest learning at a qualitatively new level is offered by multimedia technologies in the creation of visual aids that are widely used in the education of the 21st century (Kuziv et al., 2022).

The article shows:

- factors that will help the application of new information technologies in the education system;
- the components that ensure the use of information technologies during the study of

вивчення є використання телекомунікаційних технологій в освітньому процесі. Виокремлено найбільш потужні і дієві елементи інформаційно-комп'ютерних технологій під час навчання, суттєві інноваційні технології в методиці викладання іноземних мов, що варто використовувати студентам у вищій школі. Для викладання іноземної мови, взагалі, та для стимулювання пізнавальної діяльності студентів, зокрема, необхідним є застосування цифрових інструментів. Наведено приклади найсуттєвіших та запропоновано рекомендації щодо методів роботи з ними.

Ключові слова: нові інформаційні технології, вивчення іноземної мови, якісна підготовка, здобувачі освіти, вища школа.

a foreign language in a higher educational institution;

- features of distance learning when learning a foreign language;
- the principles of the application of telecommunication technologies in education;
- various multimedia tools productive for the educational process;
- the use of presentation in the process of learning a foreign language;
- The use of modern authentic educational materials and Internet resources during classes;
- the effectiveness of learning English.

Purpose: to analyze new information technologies for learning a foreign language, which are necessary for the high-quality training of a specialist.

Literature Review

O. Ivanova (2018), while learning English, revealed an approach focused on the use of problem-communicative tasks, revealed its possibilities to activate the speech activity of students when solving exercises, for the execution of which it is necessary to express one's own opinion, justify, explain, prove.

O. Oliynychenko (2019) offered the practice of teaching a foreign language using the latest methods, modern information and communication technologies. The advantages and possibilities of traditional and innovative training are shown.

O. Ponomarenko (2020) gave examples of foreign language classes using audio and video materials to increase interest in language learning. During oral practice, students are offered lexical material for studying technical texts.

S. Vysotchenko & Malinovska (2021) described the peculiarities of teaching foreign languages with the help of distance learning. The advantages of education are shown and the factors of successful implementation in the information environment are highlighted, with the help of which high-quality organization of education is carried out with the help of face-to-face and remote information and communication technologies. The possibilities of high-quality teaching of foreign languages with the help of distance learning are shown. Progressive ideas of distance learning in the educational process of different countries of the world are singled out.

O. Melnyk (2021) studied the peculiarities of students' English language learning and proposed the use of innovative methods: the method of project works, the method of discussion, the method of role-playing, the method of listening, which increase the motivation of students to learn a foreign language.

O. Vasyukovich (2020) presented innovative technologies for teaching English to professional students and divided them into technologies that are: used in the Internet and computer technologies (the advantages of an interactive whiteboard-type IBW are shown).

S. Bobrovnyk, S. Boyko & O. Volkova (2021) considered and singled out the possibilities of using the theoretical and practical foundations of distance learning of the English language. They showed the need for education in online learning conditions. It was proposed to use innovative methods for teaching English: the discussion method, the listening method, the project work method, and the role-playing method. Such methods will contribute to the motivation of education seekers to learn a foreign language.

I. Podoliaka & O. Kelyukh (2021) considered the possibilities of using information technologies in foreign language classes, characterized the importance of electronic tools, showed various forms of working with them; offered the most effective electronic platforms for distance learning when learning a foreign language; created methodological recommendations for improving vocabulary, pronunciation, grammar, speaking, listening, reading, writing.

K. Perepelitsa (2022), while studying a foreign language at a higher education institution, showed: the influence of telecommunication technologies on the independent work of students; the impact of the integration of computer technologies, and, as a result, the formation of self-educational competence among students.

M. Kuziv, O. Nychko & I. Belinska (2022) proposed and proved the effectiveness of using multimedia tools in foreign language classes and showed the advantages of teaching communication.

Methodology

To solve the set goal, a complex of interrelated research methods was used: analysis of scientific, scientific-methodical, regulatory, and legal sources; analysis and synthesis – to clarify the content of the studied concepts; systematization and generalization – for the definition and theoretical justification of the main provisions of the application of information technologies in the study of a foreign language, which are necessary for the high-quality training of a specialist.

The research takes into account the levels of scientific and pedagogical knowledge: methodological, theoretical, and methodical.

The methodological level made it possible to determine the principles, approaches, and main ideas of the problem of introducing new information technologies in the study of a foreign language for the qualitative training of a specialist, to characterize research methods, and to clarify the essence of the studied concepts.

The theoretical level made it possible to develop a strategy, the introduction of new information technologies in the study of a foreign language for the qualitative training of a specialist and, on its basis, to build an experimental program of professional training of higher education students with the help of new information technologies in the study of a foreign language.

The methodological level shows the integration of practice and theory. With the help of the selected methodology, the forms are presented, the content is updated, the means, ways of implementation, methods, technologies, the system of introducing new information technologies in the study of a foreign language are presented for the qualitative training of a specialist, which improves the level of the educational sphere in the information and

educational environment of higher education institutions.

The methodological basis of the research makes it possible to analyze the research subject based on the following approaches:

- paradigmatic (analyzes the pedagogical process based on new information technologies when learning a foreign language for the qualitative training of a specialist, binary oppositions: the creation of an information environment in education and professional training of specialists in this environment);
- system (considers new information technologies when learning a foreign language for high-quality training of a specialist, as an element of the system);
- personally oriented (takes into account the individual characteristics of higher education applicants for the use of new information technologies when learning a foreign language for high-quality training of a specialist);
- contextual (reveals the connection between the professional training of a specialist using new information technologies and his professional and pedagogical activity in learning a foreign language for quality training);
- axiological (considers the introduction of new information technologies when learning a foreign language for the qualitative training of a specialist, taking into account the universality of the individual);
- competence (contributes to the formation of the ability to solve problems in foreign language learning based on the acquired competencies for the qualitative training of a specialist);
- humanistic (personality formation when learning a foreign language, improvement of the social environment for new information technologies when learning a foreign language for high-quality specialist training);
- practice-oriented (manifested in the professional-pedagogical orientation of the system for the introduction of new information technologies when learning a foreign language for high-quality training of a specialist);
- complex (characterizes the functions of introducing new information technologies when learning a foreign language for high-quality training of a specialist, predicts personality development, draws a conclusion).

Results and Discussion

1. Factors that will help the application of new information technologies in the education system.

Informatization of education is a priority and necessary direction of informatization of society, which aims to apply new information technologies to the education system, which will help:

- to improve the management mechanisms of the educational system;
- to improve the selection of content, forms, and methods of education that will contribute to the development of the student of education in the conditions of the informatization of society;
- the creation of training systems that will provide the intellectual potential of the student of education, provide the ability to independently acquire knowledge, and carry out research activities;
- creation and use of computer tests for assessment of the knowledge, diagnostic methods, and control systems (Fadeev, 2003).

2. Components that ensure the use of information technologies during the study of a foreign language in a higher educational institution

The continuous development of informatization of education allows to expand of the scope of application of information technologies during the study of a foreign language in a higher education institution and ensures:

- the independent activity of education seekers by organizing educational activities in different ways;
- differentiation of education, through the introduction of interactive dialogue and independent choice of the learning process;
- formation of information culture through informatization of education, which expands the possibilities of using information technologies;
- increasing the motivation of learning through computer visualization of educational objects.

For the high-quality training of a specialist, information technologies for learning a foreign language have many advantages over traditional teaching methods. Information technologies train language activity, form linguistic abilities, use

various combinations, help to understand language phenomena, create communicative situations, automate language actions, enable the implementation of an individual approach, and increase the possibilities of independent work of the student of education.

Information technologies, improving the study of a foreign language, provide an opportunity for deep and rapid assimilation of vocabulary, learning to write, clarity of pronunciation, dialogic and monologic speech, and improvement of grammatical structures (Lenets & Havrysh, 2017).

When learning a foreign language, it should be taken into account that the content component of foreign language learning is primarily methods of activity and not the basics of science. This is the specificity of the subject. Let's list the methods of learning activity – different types of speech activity: speaking, reading, writing, and listening. Remote learning plays an important role in learning a foreign language, which is a motivating factor for the learner in learning foreign languages. In the end, distance learning helps to achieve meta-subject, subject, personal, and learning results. With this approach, the goal of learning foreign languages is aimed at the formation of competence (non-language communicative).

3. Peculiarities of distance learning when learning a foreign language

Features of distance learning when learning a foreign language are:

- interaction of participants in the educational process (network (remote));
- not just independent work, but a large amount of it, which is carried out in the "Just in time" mode;
- interactivity;
- compulsory selection of material for students of education (authentic texts), its structuring,
- the latest pedagogical technologies, etc. (Vysotchenko & Malinovska, 2021).

When working in the conditions of distance learning, it is worth knowing: the purpose of training, goals, and the necessary informational, methodological, material, and technical support. It is necessary to take into account the students' previous level of knowledge of the language, their learning needs, and know what results they are trying to achieve. Independent work of students is of great importance in the conditions

of distance learning (Kyrychenko & Ovsyanko, 2020).

4. Principles of application of telecommunication technologies in education

When learning a foreign language, a mandatory element of its quality study is the use of telecommunication technologies in the educational process – that is, the use of means and methods of collecting material, its storage, methods of processing, analysis, and synthesis of information. This approach, when using telecommunication technologies, is based on the wide application of technology for:

- effective improvement of training efficiency;
- providing students with cognitive activities;
- the possibility of providing independence;
- management of the educational process of the higher education institution (Perepelitsa, 2022).

The development of information technologies has made it possible to update the organization of the foreign language learning process in a higher education institution.

5. Various productive multimedia tools for the educational process

The use of multimedia tools in the process of learning a foreign language is necessary and effective. Multimedia (from the English multi – many and media – medium) includes computer technologies in which there are several information media, such as text, video, elements of computer graphics (schemes, animation, photos, 3D graphics, etc.), sound. The following multimedia tools are the most productive for the educational process:

- static;
- dynamic;
- interactive (Kuziv et al., 2022).

Studying a foreign language in a higher education institution is impossible without the use of information and computer technologies. They allow students to take an active part in the lesson, expand educational opportunities and contribute to the development of their interest in the subject.

The most powerful and effective during education are the following elements of information and computer technologies:

interactive whiteboards, electronic textbooks, electronic reference books; test simulators, the Internet, media files, audio, video, interactive conferences, interactive atlases, interactive contests, interactive maps, remote support of the educational process, platforms for remote support of the educational space for learning a foreign language.

A foreign language is a leader among disciplines and occupies a special place because it allows you to study another culture, immerse yourself in history, familiarize yourself with the traditions of the people whose language you are studying, find out the speech characteristics of people who speak exactly the language that is native to them and which one you are studying (Ternova, 2020).

Information technologies of education make it possible to model the educational process, improve the conditions of educational activity, apply various training exercises of a situational nature, and as a result achieve the efficiency and effectiveness of the educational process using its informatization.

Thus, having mastered the lexical and grammatical material on a certain topic, students must independently develop oral messages, illustrate the collected material and present their findings to the group. The most professional presentation is when the presentation itself complements the speaker's words, illustrates his speech, creating a bright, interesting, and creative picture of the performance.

6. Usage of presentation in the process of learning a foreign language.

Presentations, which are an active method of learning, are appropriate for use in the process of learning a foreign language because they improve all components of communicative competence (Polikarpova, 2012):

- 1) linguistic competence, which contributes to the study of language forms, and the development of phonetic, grammatical, and lexical speech skills;
- 2) sociolinguistic competence, which provides an opportunity to use and change language skills depending on the situation, to study the semantic meanings of words and expressions, to consider and apply denotative and connotative meanings, to study the reaction they can cause in the audience;

- 3) sociocultural competence, which ensures readiness, ability, and tolerance for high-quality dialogue between cultures;
- 4) strategic competence, which provides all the ways to the ability of skillful and effective communication, choosing an author's strategy;
- 5) discursive competence, which has all the possibilities to combine separate sentences into a coherent message, using knowledge, syntactic and semantic means; techniques, information transfer, compensatory skills, paralinguistic means;
- 6) social competence, which confirms the desire to cooperate with other students of education, readiness, gives confidence in one's knowledge, teaches to listen to the interlocutor, understand other students of education, value their opinion, empathy, ability to overcome language conflicts, reach a compromise, use partnership and cooperation.

Therefore, in pedagogical activities, foreign language teachers should use information technologies for the development of intercultural competence for students of higher education institutions (Kuziv et al., 2022).

Let's highlight the most significant innovative technologies in the methodology of teaching foreign languages, which should be used by students in higher education.

The virtual classroom is an online environment used in the educational process of an educational institution whose database is located on the Internet.

Access to the educational environment is carried out through the portal or the software. A student, located in a virtual classroom (in particular, all students enter the virtual environment at the same time and at the same time can be both in the same building and at a distance of several thousand kilometers from each other), synchronously discusses questions in the conference mode that the teacher offers by showing the screen of any - which monitor to all students and sees several images of students at the same time, observes them and provides assistance, organizes a discussion.

Massive Open Online Courses (MOOC) are multi-faceted, extensive, open, universally developed interactive courses by specialists of world-renowned universities, available to anyone via the Internet. Students watch educational videos (10–15 minutes) and

participate in an online discussion on the forum together with the teacher. Students need to perform control tasks, control tasks, and tests. Synchronous learning – simultaneous participation of students and teachers in synchronous online classes.

Asynchronous learning – asynchronous classes contain online material – lectures, tests, and tasks, which can be accessed at any convenient time for students (the time for students to study online must be prescribed at a certain time, but they are free to choose this time (Redko, 2011).

"Reversed classroom" (reversed learning) – education in which lectures and learning a foreign language take place online, and homework is performed in a real classroom.

Blended Learning – "inverted audience" training is used to master the content of the material in a foreign language during the independent work of students (Alyoshina, 2012).

With such training, the components of full-time and remote (carried out outside the institution of higher education) training alternate.

In the "inverted audience" learning mode, the student's responsibility is observed, his responsibility, activity, and initiative increase, his skills of self-organization, and managing temporary resources increase, and the opportunities to not just read about traditions in a textbook about how English holidays take place, but to see such actions in real-time, increase. This non-traditional format of tasks motivates students to study a foreign language qualitatively and interestingly.

A Learning Management System (LMS) is a software product or site used to plan, implement, and evaluate an educational process. This approach provides an opportunity to create, present developed materials, and participate in interactive processes: discussions on discussion forums, blogs, and video conferences, to be a participant in such an educational process, and to evaluate the process.

Mobile learning – electronic learning that does not depend on time and place, is carried out using special software and is based on interdisciplinary and modular approaches. It takes place with the help of mobile devices: mobile phones, tablets, laptops, digital devices, and such stationary and publicly available equipment for video conferences, electronic boards, and language equipment (Alyoshina, 2012).

Innovative technologies in the methodology of teaching foreign languages, which should be used by students in higher education, are carried out using a smartphone, or a personal computer outside the classroom (Reida et al., 2020).

The most effective way to learn a foreign language is through the context of its application. At the same time, it is necessary to use authentic texts. Authentic texts meet the language needs of students and provide concrete forms to the functions, structures, and signs of speech (Council of Europe, 2001).

The formation of foreign language communicative competence in a higher education institution is of great importance when learning a foreign language for the high-quality training of a specialist because a specialist in any field needs the skills to work with foreign language sources (Biletska et al., 2021).

For the formation of foreign language communicative competence in a higher education institution, speaking practice is of great importance, which is closely related to students of education during foreign language communication, which can be either in a real or simulated environment, that is, practice takes place in close communication. It is this practice that ensures the result – the formation of foreign language communicative competence and promotes the development of foreign language speaking skills, without which there cannot be the improvement of the components of foreign language communicative competence of students of education: speaking, reading, listening and writing (Tarnopolsky & Kabanova, 2019).

The formation of foreign language communicative competence in an institution of higher education is impossible without the systematic use of authentic texts, the advantages of which are the activation of motivation to study, the professional development of the student of education, the improvement of the professional and general level of knowledge, the promotion of the competitiveness of the specialist, helps in improving speaking skills, which is facilitated by the use of original vocabulary native speakers The use of such texts provides an opportunity to acquire prognostic abilities, analytical abilities, critical abilities, and therefore contributes to the development of the specialist's professional competence (Oliynychenko, 2019).

7. Usage of modern authentic educational materials and Internet resources during classes

It is important and effective to use modern authentic educational materials and online resources during classes:

- 1) podcasts in English (Ruby5.codeschool.com, Se-radio.net, Herdingcode.com, Fivejs.codeschool.com);
- 2) online magazines, online blogs (Technologyreview.com, Sdtimes.com, Improgrammer.net);
- 3) distance courses, electronic textbooks on the Moodle platform;
- 4) online dictionaries of the English language (Oxford English Dictionary, Cambridge English Dictionary, Computerlanguage.com, Longman Dictionary of Contemporary English, Collins English Dictionary, Computerhope.com.);
- 5) communication with students in the online learning mode requires communication via e-mail, telephone, and Viber and Telegram applications.

8. Effectiveness of learning English

The effectiveness of learning English contributes to:

- 1) electronic educational and educational-methodical complexes, consultations, individual classes on Zoom, Skype, Google Meet, Viber, Telegram, and other services for remote work; use of online resources, and online exercises;
- 2) online blogs of BBC Learning English, British Council Learn English, Cambridge English Dictionary, Cambridge Assessment English; Youtube channels, video lessons, podcasts ("<https://www.engvid.com/>"); online tutorials (Bobrovnyk et al., 2021).

For teaching a foreign language, in general, and for stimulating the cognitive activity of students, in particular, it is necessary to use digital tools. We will give examples of the most important ones and offer recommendations on methods of working with them.

Multimedia lesson – a lesson for effective learning using digital technologies and technical means (trainers, various software systems, test programs, multimedia presentations, graphic editors, and schemes for editing on the Internet). Students' adaptive abilities to education increase,

non-stereotypical thinking, and objective self-assessment are formed.

Electronic textbooks (training simulators) are the most accessible multimedia tools for students of education. Electronic applications are used for textbooks, which include programs for grammar training, word memorization, listening, and writing, which help students to better remember the material with the help of graphic images.

Educational games aim to help students interestingly improve their English language skills.

The most promising direction of assistance in interest in learning a foreign language is business games (talk shows, quizzes, debates, simulation games, etc.), which bring education closer to real conditions, develop students' abilities, form practical skills, update the educational environment, facilitate testing acquired knowledge of the specialty in practice, ensure the formation of a culture of professional communication of a specialist, self-realize a person as a future specialist. In the conditions of a pandemic, this method of learning can be implemented using platforms for distance education (Microsoft Teams, Moodle, Microsoft Classroom, Kahoot, Google Meet, and others).

Electronic testing is a tool that makes it possible for the teacher to qualitatively conduct not only an assessment of the knowledge of students but also to conduct monitoring and is a self-control tool along with visual control of results.

The basic resource should be the resource of the Joint European Commission for the Acquisition of Foreign Languages (CEFR), which determines the level of language acquisition based on the scale used within the framework of the Bologna Convention (Podoliaka & Kelyukh, 2021).

Conclusions

New information technologies for learning a foreign language, which are necessary for the high-quality training of a specialist, have been analyzed. The purpose of informatization of education is determined, and it is shown as a priority and necessary direction of informatization of society, which has as a mandatory priority the application of new information technologies in the education system, which will help: improve the mechanisms of management of the educational system; to improve the selection of content, forms, and teaching methods that will contribute

to the development of the student of education in the conditions of the informatization of society; the creation of training systems that will provide the intellectual potential of the student of education, provide the ability to independently acquire knowledge, carry out research activities; creation and use of computer tests for assessing knowledge, diagnostic methods, control systems. Information technologies, improving the study of a foreign language, provide an opportunity for deep and rapid assimilation of vocabulary, learning to write, clarity of pronunciation, dialogic and monologic speech, and improvement of grammatical structures.

The peculiarities of distance learning when learning a foreign language are determined. When learning a foreign language, a mandatory element of its quality study is the use of telecommunication technologies in the educational process.

The most powerful and effective elements of information and computer technologies during education, essential innovative technologies in the methodology of teaching foreign languages, which should be used by students in higher education, are singled out.

For teaching a foreign language, in general, and for stimulating the cognitive activity of students, in particular, it is necessary to use digital tools. Examples of the most important ones are given and recommendations on methods of working with them are offered.

We see the further search for research in the creation of training systems that will provide the intellectual potential of the student of education, provide the ability to independently acquire knowledge, and carry out research activities.

Bibliographic references

Alyoshina, O.M. (2012). Modern methods and technologies of teaching foreign languages in universities. Problems and prospects of the formation of the national humanitarian and technical elite, 30, 125–159. (In Ukrainian)

Biletska, O., Kuchai, T., Kravtsova, T., Bidyuk, N., Tretko, V., & Kuchai, O. (2021). The Use of the Activity Approach in Teaching Foreign Languages in Higher Education Institutions. *The Romanian Journal for Multidimensional Education*, 13(2), 243-267. DOI: <https://doi.org/10.18662/rrem/13.2/420>

Bobrovnyk, C., Boyko, S., & Volkova, O. (2021). Peculiarities of online learning of the

professional English language for students of technical specialties. *Pedagogical sciences: theory, history, innovative technologies: Scientific Journal*, 4(108), 327–335. DOI: 10.24139/2312-5993/2021.04/327-335

Correa Cruz, L., López de Parra, L., Rojas Bahamón, M. J., & Arbeláez Campillo, D. (2017). Normatividad y estrategias de formación de profesores en tecnologías de la información y comunicación. *Academia Y Virtualidad*, 10(1). <https://doi.org/10.18359/ravi.2199>

Council of Europe (2001). *Common European Framework of Reference for Language Learning, Teaching, Assessment*. Cambridge University Press. <https://rm.coe.int/common-european-framework-of-reference-for-languages-learning-teaching/16809ea0d4>

Fadeev, S. V. (2003). About the issue of using a computer in IM education. *Foreign languages at school*, 5, 15–17.

Ivanova, O. V. (2018). Problem-communicative tasks from the discipline "English for professional direction" for students of technical specialties. *Scientific journal "International Philological Journal"*, 281, 209-215 (In Ukrainian)

Kuziv, M., Nychko, O., & Belinska, I. (2022). Teaching communication using multimedia tools in foreign language classes. *Bulletin of the Cherkasy National University named after Bohdan Khmelnytskyi. Series: "Pedagogical Sciences"*, 1, 90–96. <https://doi.org/10.31651/2524-2660-2022-1-90-96>

Kyrychenko, S. V., & Ovsyanko, G. V. (2020). Teaching English to students of technical higher education institutions in the conditions of distance learning. *Bulletin of Zaporizhzhya National University. Pedagogical Sciences*, 3(36), 175-180. (In Ukrainian)

Lenets, I. P., & Havrysh, O. G. (2017). The role of information technology in English lessons in primary school. *Collection of scientific papers DonNABA*, 4(2), 26-29. (In Ukrainian)

Melnyk, O. D. (2021). Innovative methods of teaching English to students of technical specialties at the Vinnytsia National Technical University. *International scientific and practical conference "Philological sciences and translation studies: European potential": conference proceedings*, 9-10, 311-314. (In Ukrainian)

Oliynychenko, O.B. (2019). Methods of activating the educational process in teaching English for special purposes. *Transcarpathian*

- Philological Studies, 11(1), 126-132. (In Ukrainian)
- Perepelitsa, K. (2022). Formation of self-educational competence of students based on telecommunication technologies during learning a foreign language at a technical institution of higher education is a basic component of the professional competence of a specialist. *Young scientist*, 6(106), 57-60. <https://doi.org/10.32839/2304-5809/2022-6-106-12>
- Podoliaka, I. M., & Kelyukh, O. Yu. (2021). Peculiarities of the use of new information technologies in teaching English in higher educational institutions. *Pedagogy of creative personality formation in higher and secondary schools*, 76(2), 194-199. <http://pedagogy-journal.kpu.zp.ua/index.php/archiv?id=144>
- Polikarpova, Yu.O. (2012). Presentation as an active learning method. *Culture of the Peoples of the Black Sea Region*, 231, 159–162. <http://dspace.nbu.gov.ua/handle/123456789/46254>
- Ponomarenko, O. G. (2020). Modern approaches in teaching English for students of technical specialties. *Scientific journal "International Philological Journal"*, 11(3), 127-131. (In Ukrainian)
- Redko V. (2011). Interactive foreign language learning technologies. *Native school*, 8–9, 28–36. (In Ukrainian)
- Reida, O.A., Ivleva, K.S., & Guliyeva, D.O. (2020). Innovative technologies in the methodology of teaching foreign languages to students of technical specialties. *Innovative pedagogy. Theory and methodology of professional education*, 20(2), 111-114. https://rep.btsau.edu.ua/bitstream/BNAU/5932/3/Innovatsiyni_tehn.pdf
- Tarnopolsky, O., & Kabanova, M. (2019). *Methods of teaching foreign languages and their aspects in higher education: a textbook*. Dnipro: University named after Alfred Nobel.
- Ternova, O. I. (2020). The use of multimedia technologies for the development of intercultural competence of students of non-language higher education institutions. *Scientific notes of the National University "Ostroh Academy". Series "Philology"*, 9(77), 228–231. (In Ukrainian)
- Vasyukovich, O. M. (2020). Innovative learning technologies in the study of professional English in higher technical educational institutions of Europe. *Proceedings. Series: Pedagogical Sciences*, 191, 52-55
- Vysotchenko, S., & Malinovska, I. (2021). Peculiarities of teaching foreign languages in distance learning conditions. *Scientific notes of Ternopil National Pedagogical University named after Volodymyr Hnatyuk. Series: Pedagogy*, 1(1), 90–98. <https://doi.org/10.25128/2415-3605.21.1.11>