

НОВІТНІ ТЕХНОЛОГІЇ НАВЧАННЯ У ВИЩІЙ ШКОЛІ

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MODERN INFORMATION, COMMUNICATION AND INTERACTIVE TECHNOLOGIES FOR FOREIGN LANGUAGE TEACHING

У статті розглядаються та аналізуються основні аспекти використання інформаційно-комунікаційних та інтерактивних технологій при навчанні іноземної мови, а також описуються перспективи їх подальшого застосування. Розглянуто можливості інформаційно-комунікаційних та інтерактивних технологій у процесі навчання іноземної мови майбутніми фахівцями. Розкрито поняття інформаційно-комунікаційних та інтерактивних технологій навчання на основі аналізу існуючих підходів науковців до проблеми використання інформаційно-комунікаційних та інтерактивних технологій у процесі вивчення іноземної мови. Обґрунтовано переваги інформаційно-комунікаційних та інтерактивних технологій на заняттях з іноземної мови для майбутніх фахівців. На основі аналізу різноманітних підходів застосування комп'ютерної комунікації розкрито суть цього поняття та обґрунтовано способи його подальшого використання під час вивчення іноземної мови. Надано переваги технологій синхронної (online) та асинхронної (offline) комунікації: вони сприяють як міжособистісній, так і однобічній комунікації; забезпечують інтерактивний режим роботи з навчальним матеріалом, надають зручний доступ до інтегрованих баз знань, довідників. Доведено, що завдяки інфокомунікаційним технологіям відбувається діалогізація навчального процесу, що проходить в характерному інформаційно-комунікаційному середовищі. Охарактеризовано сутність терміну "інтерактивні технології", під яким розуміють навчання у співробітництві, коли і студенти, і викладач є суб'єктами освітнього процесу.

Ключові слова: інтеграція інформаційних та комунікаційних технологій, дистанційне навчання, традиційні освітні технології, автентичне спілкування, міжкультурна комунікація, міжкультурний та міжособистісний професійний іншомовний діалог і міжнародне співробітництво, інтегративність середовища, моделювання життєвих ситуацій.

В статье рассматриваются и анализируются основные аспекты использования информационно-коммуникационных и интерактивных технологий при обучении иностранному языку, а также описываются перспективы их дальнейшего применения. Рассмотрены возможности информационно-коммуникационных и интерактивных технологий в процессе изучения иностранного языка будущими специалистами. Раскрыто понятие информационно-коммуникационных и интерактивных технологий обучения на основе анализа существующих подходов ученых к проблеме использования информационно-коммуникационных и интерактивных технологий в процессе изучения иностранного языка. Обоснованы преимущества информационно-коммуникационных и интерактивных технологий на уроках иностранного языка для будущих специалистов. На основе анализа различных подходов применения компьютерной коммуникации раскрыта суть этого понятия и обоснованно способы его дальнейшего использования при изучении иностранного языка. Предоставлено преимущества технологий синхронной (online) и асинхронной (offline) коммуникации: они способствуют как межличностной, так и односторонней коммуникации; обеспечивают интерактивный режим работы с учебным материалом, предоставляют удобный доступ к интегрированным базам знаний, справочников. Доказано, что благодаря инфокоммуникационных

технологиям происходит диалогизация учебного процесса, проходящего в характерном информационно-коммуникационной среде. Охарактеризованы сущность термина «интерактивные технологии», под которым понимают обучение в сотрудничестве, когда и студенты, и преподаватель являются субъектами образовательного процесса.

Ключевые слова: интеграция информационных и коммуникационных технологий, дистанционное обучение, традиционные образовательные технологии, аутентичное общение, межкультурная коммуникация, межкультурный и межличностный профессиональный иноязычный диалог и международное сотрудничество, интегративности среды, моделирование жизненных ситуаций.

Formulation of the problem. At present there is a rapid development of information, communication and interactive technologies which inevitably leads to the information advance of higher education. The matter is that higher education institutions need to improve the quality of training of future professionals with a new type of thinking and culture that can meet the requirements of today's information society and communication space. We are convinced that the level of development of the information environment should correspond to the quality of preparation of future specialists for the implementation of modern foreign language communication. The volume of information is constantly increasing and therefore the ability of the individual to perceive, process, assimilate, transfer and use it in a professional activity must be at an appropriate level. Thanks to the introduction of information, communication and interactive technologies in education it is possible to resolve these contradictions.

Analysis of recent research and publications. A large number of scientists were engaged in theoretical and practical aspects of the problem of computerization of education: B. Gershunsky, A. Korotkova, E. Mashbits, V. Rubtsova, O. Tishchenko and others. The problems of teaching foreign language communication through the use of interactive technologies are devoted to many works of both national and foreign scientists highlighting their great practical value (M. Skatkin, S. Gaponova, V. Filatov, B. Esipov, V. Palamarchuk, G. Vashchenko, L. Vishniakova, O. Pometun, G. Sirotenko, O. Tarnopolsky, Y. Babanskiy and others). Scientists M. Alekseev, S. Grigoriev, B. Gershunsky, A. Ogol, A. Petrov determine the possibilities of computer communication in higher educational establishments regarding changes in the content of teaching in disciplines. However, researchers mainly focus on the individual communicative properties of computer education (Z. Jaliashvili, V. Kolesnikov, A. Kritsky, G. Chusavitina).

However, there is a lack of thorough research on identifying and implementing information, communication technologies and interactive technologies in the process of learning a foreign language.

The purpose of the article: to unveil the possibilities of information, communication and interactive technologies in the process of learning a foreign language by future specialists.

According to the purpose, the following **tasks** were set:

- to analyze the existing approaches of scientists to the problem of using information, communication and interactive technologies in the process of learning a foreign language;
- to expose the concepts of information, communication and interactive learning technologies;
- to substantiate the benefits of these technologies in foreign language classes for future;
- to analyze the various approaches to the use of computer communication;
- to reveal the essence of this concept and to justify ways of its further use in learning a foreign language.

The main presentation of the material

Undoubtedly the current stage of development of our country requires from future specialists such qualities as flexibility, ability to communicate, ability to adapt to diverse everyday situations, ability to think critically, ability to master conflicts and to be prepared for conducting intercultural and interpersonal professional interpersonal cooperation. In today's society the Internet, information and communication technologies have complemented virtually all areas of activity, including pedagogical. Due to their powerful influence, there is a reorientation of social consciousness to the need to master new forms, a culture of communication, as part of the universal culture that characterizes the level of development of modern society. It is simply

impossible to imagine a modern education system without the use of information networks. Therefore, teachers of higher education institutions must not only use them, but also live, cooperate, compete with them. So far many philologists use information, communication and interactive technologies to conduct various linguistic studies.

It should be noted that there is a reorientation of the status of a foreign language in our society. There is a huge demand for knowledge of foreign languages especially among future specialists in non-linguistic specialties. Ukraine is focused on reforming the English language teaching system at universities, professional improvement and professional competences of teachers, methodology and materials for teaching English programs.

That is why today it is necessary to pay serious attention to the efficiency and quality of the process of learning foreign languages in particular English. And the overriding task is to create such a learning environment where future professionals could apply information, communication and interactive technologies in learning a foreign language.

Information and communication technologies are known to be information processing technologies by computer and telecommunication. The term info-communications technology has recently emerged and has a dual character - information content (information environment) and communication capabilities (communication tool). It is considered to be the system of methods and ways of input, processing, storage, and output, retrieving and transmitting information on computer networks [4, 6].

Usually different technologies are synchronous (online) and asynchronous (offline) communication. The advantages of these technologies are that they facilitate both interpersonal and one-way communication; provide interactive mode of work with educational material, offer convenient access to the integrated knowledge bases, directories. Thanks to info-communication technologies, the educational process takes place in a typical information and communication environment [1, 2].

An important characteristic is the integrative environment in which we understand the combination of information and communication capabilities, traditional methods and modern educational technologies (meta-environment). Another characteristic is the multidimensionality and multicultural environment (multi-environment) which refers to communicative interactions (student - teacher, student - student, student - content, etc.) [5, 9].

In terms of the essence of the concept, "interactive technology" means learning in collaboration when both students and teacher are subjects of the educational process. These are the technologies that stimulate students to creative, productive work, arousing a desire for active action, communication and expression of their thoughts in English. It should be noted that the educational process takes place under the conditions of constant, active interaction of all students. The use of interactive technologies involves the modeling of life situations, the use of role-playing games, joint problem-solving based on an analysis of circumstances and the relevant situation. There is an effective formation of skills and abilities, development of values, an atmosphere of cooperation, interaction is created [1, 8].

It should be emphasized that interactive technologies contribute to the intensification and optimization of the academic process.

The main advantages of interactive technologies:

- help students learn how to express their opinions correctly;
- students learn to work in a team;
- friendly attitude towards the opponent is formed;
- a large amount of material is mastered in a short time;
- ability to analyze the information received;
- the skills of tolerant communication are formed;
- the opportunity to use the knowledge and experience acquired previously;
- to debate, to defend one's own point of view;
- to be more confident and independent
- a "success situation" is created [4, 6].

The main features of interactive technologies are: bilateral; construction of learning on the interaction of the student with the learning environment which serves as a space for the acquired experience; special organization and variety of forms; change of interaction between

the teacher and students: the activity of the teacher is inferior to the place of activity of students, and the task of the teacher is to create the conditions for their initiative; integrity and unity; the role of the teacher as consultant, organizer, source of information; motivation and connection to real life; lack of dominance of any participant of learning over other education and development of students' personality at the same time as the process of learning new knowledge. [2].

Effective interactive learning technologies that contribute to the formation of foreign professional dialogue are: "carousel", "aquarium", "large circle", "microphone", unfinished sentences, "brainstorming", problem analysis, "mosaic", circle of ideas, role play situations, discussion, talk shows, "six thinking hats" etc.

Application of the offered interactive technologies during the educational process will contribute to: effective repetition of the learned vocabulary, replenishment of vocabulary; deep learning of proper articulation skills; development of attention, memory, thinking; forming skills to work in pairs, groups.

A great attention must be paid to the 6 Thinking Hats interactive game. The Six Hats method is a psychological role-playing game the meaning of which is to consider the same problematic situation from 6 independent points of view. This allows you to form the most comprehensive view of the subject matter and to evaluate the advantages and disadvantages at the logical and emotional levels. The method was offered by the British writer, psychologist and creative thinking specialist Edward de Bono in 1985. The basis of this approach is the concept of parallel thinking. By "trying" 6 independent types of thinking in the process of solving practical difficulties 3 main problems can be easily overcome:

- Lack of superfluous emotions: assessing a particular situation from different perspectives contributes to the fact that we make decisions by conducting complex analysis in 6 independent ways.

- Lack of confusion: a multi-level task of heightened complexity can cause feelings of self-doubt. The concept of parallel thinking allows you to approach the problem systematically gathering facts and evaluating all the pros and cons.

- No inconsistency: using such a technique allows you to structure the entire information on individual grounds i.e. solve a problematic issue using a systematic approach while leaving time for creativity.

What symbolizes the color of each of the six "hats"? A hat of a certain color implies the inclusion of an appropriate mode of thinking which should be followed by the student or the team at the time of arguing their position during the discussion game:

- White - focus on information (analysis of known facts and figures as well as assessing what information is missing and what sources can be obtained).

- Yellow - research on possible success, search for benefits and optimistic forecast of the event / idea / situation under consideration.

- Black - assess the situation in terms of the shortcomings, risks and threats of its development.

- Red - attention to emotions, feelings and intuition. Without going into details and considerations, all intuitive assumptions are made at this stage.

- Green - search for alternatives, generate ideas, and modify existing developments.

- Blue - manage the process of discussion, summarizing and discussing the usefulness and effectiveness of the method in specific circumstances.

It should be highlighted that modern information technologies and innovative methods of learning a foreign language in Ukraine are based on the Council of Europe's Common European Recommendations on Language Education: Study, Teaching and Assessment. Therefore computer information technology is a major component of enhancing the motivation of modern learning and learning a foreign language. [1, 3]

It has been credited that computer communication makes it possible to use your computer as a universal means of processing and transmitting information. It provides access to an unlimited array of information stored in centralized databases ensuring that the educator uses all the knowledge available to the information society in the educational process.

Computer communication is a process of information exchange between subjects through verbal and non-verbal communication systems, mediated by computer means of communication.

The use of computer communications strengthens the requirements for written speech; it involves the skill to use information resources of computer technologies [6, 8].

In addition there are many free online resources available today for online classes with students.

Quizlet is an online service for creating didactic flash cards for both full-time and distance learning. The required information is entered into the appropriate fields and automatically the teacher receives in addition to the set of cards that perform the educational role, and various modes of work with them: training, training, control and game. You can create cards for any subject. Its purpose is from the assimilation of terms, concepts, to the solution of algebraic equations. Quizlet has the ability to upload images and record your voice. The Play block is represented by three games Match, Gravity, Live.

Kahoot is an application for educational projects. It enables teachers to create tests, surveys, training games or organize a marathon of knowledge. This app works on both computers and smartphones.

Mentimeter is a tool that allows the speaker to represent the audience in real time. Using this tool the speaker can find out what the audience thinks about one way or another through online voting via mobile phones, tablets or computers. The purpose of this service is to create effective bilateral interaction at conferences and meetings.

Thus, in practice, teaching is now of great importance to the author's didactic tools designed for the needs of a specific lesson, taking into account the characteristics of the contingent of students. The above review of the online environment demonstrates the great ability of the teacher to independently create didactic resources. The developed didactic materials can be used for both individual and group and frontal organization of students' cognitive activity [7, 8].

It is necessary to mention that cramming at any time is not always effective. The psychologist Ebbinghaus found out how long the studied compounds were stored in memory. It turns out that forgetting is very fast: 60% of words are forgotten in an hour, in six days only 20% remains, about the same in a month. It follows that the words learned should be repeated especially often for the first time after learning: then they will be delayed into long-term memory. So if you have one day to study you should repeat the words:

1. Immediately after memorization
2. 20 minutes after the first repetition
3. 8 hours after the second
4. 24 hours after the third

If there is a lot of time you can do the following:

1. Immediately after memorization
2. in 20-30 minutes
3. in 1 day
4. in 2-3 weeks
5. in 2-3 months

It is well known that the use of information technology in foreign language learning determines the intensity of dialogue. It is understood that if the information is exchanged via email, the dialogue is slowed down because it is done in writing. A high degree of dialogue intensity is achieved through computer conferences, in which teachers and students answer the questions of others and each participates in the dialogue, enriching it informatively [2].

The teaching of a foreign language by means of information and technical means is determined by the following criteria:

1. to promote the efficiency of the educational process;
2. to provide immediate and constant reinforcement of the correctness of each student's educational actions;
3. to raise awareness and interest in language learning;
4. to provide prompt feedback and operational control of the actions of all students;
5. to have the ability to quickly enter answers without their long coding.

The activity of the modern educator is connected with the need to use visualized means of presenting information in electronic form; collect information received from different sources over time and merge it into a related structure. For this purpose, the teacher uses the capabilities

of computer networks that provide the use of information exchange facilities and the sharing of hardware, software and information resources [7].

On this basis it is possible to increase students' motivation to learn a foreign language and to intensify the acquisition of skills specific for this discipline. Therefore, students are required to be trained in this environment and to use ICT in foreign language learning.

Conclusions and prospects for further research

Based on the analysis of scientific works we have been shown that info-communication tools have a huge potential in preparing students in the process of learning a foreign language, which make it possible to get acquainted with different authentic, text, audio and video materials activities, create the conditions for realizing the intellectual potential of students, fostering tolerance of the common culture.

In this connection it is possible to formulate the following requirements for foreign language learning tools: the ability to use different types of learning activities for organizing; possibility of updating the educational material; methodically justified graphical interface; moderate and reasonable use of video and audio; the ability to process different types of data; local and network mode of work, implementation of audio control of students; the ability of the teacher to observe the process of teaching students in a networked environment; friendly intuitive interface; controlling students through quality testing. These tools should make it difficult for those students who successfully cope with the proposed tests and vice versa, and simplify the tasks for students who have difficulty completing them; collect information about common mistakes when performing tasks to process them, as well as keep statistics of errors in this section, analyze them and offer lessons to improve the assimilation of material.

In our opinion more active use of various info-communication means will facilitate the acquisition of foreign language by students in the educational space which is the basis of the experimental research we are conducting.

Bibliography

1. Ahmad, K., Corbett, G., Rogers, M., & Sussex, R. (1985). *Computers, language learning and language teaching*. Cambridge: Cambridge University Press. Google Scholar
2. Ключник Р.М. Особливості викладання соціально-гуманітарних та економічних дисциплін англійською мовою / Р.М. Ключник, А.С. Магдич // Вісник Університету імені Альфреда Нобеля. Серія «Педагогіка і психологія». Педагогічні науки. – 2019. №2 (18). – С. 182–191. DOI:10.32342/2522-4115-2019-2-18-23. – Режим доступу: <http://pedpsy.duan.edu.ua/index.php/uk/>
3. Кужель О.М. Використання персонального комп'ютера у вивченні іноземних мов / О.М. Кужель, Т.І. Коваль // Нові інформаційні технології навчання в навчальних закладах України: еауково-методичний збірник: – Вип.8: Педагогіка / редкол.: І.І. Мархель (гол. ред.) та ін. – Одеса: Друк, 2001. – С.242. – Режим доступу: <https://scholar.google.com.ua>
4. Нилов О. Английский без репетитора / О. Нилов // Компьютерное обозрение. – 1997. – №27. – С. 35–38.
5. Полат Е.С. Некоторые концептуальные положения организации дистанционного обучения иностранному языку на базе компьютерных телекоммуникаций / Е.С. Полат // ИЯШ. – 1998. – №5. – С. 6–11. – Режим доступу: <http://www.library.bsu.ru/cgi-bin>
6. Роберт И.В. Современные информационные технологии в образовании: дидактические проблемы; перспективы использования / И.В. Роберт. – М.: Школа-Пресс, 1994. – 205 с. – Режим доступу: <https://gigabaza.ru/doc/41809.html>
7. Ротмистров Н.Д. Мультимедиа в образовании / Н.Д. Ротмистров // Информатика и образование. – 1994. – №4. – С. 89–96.
8. Thanthawi Ishak, Rudi Kurniawan, Zamzami Zainuddin, Cut Muftia Keumala *The role of pre-class asynchronous online video lectures in flipped-class instruction: Identifying students' perceived need satisfaction*. Journal of Pedagogical Research, Volume 4, Issue 1, pp. 1-11. Available at: <https://doi.org/10.33902/jpr.v4i1.145>
9. Волкова Н.П. Професійно-педагогічна комунікація: навч. пос. / Н.П. Волкова – Київ: ВЦ. «Академія», 2006. – 256 с. – Режим доступу: https://library.udpu.edu.ua/library_files/412009.pdf