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INNOVATIVE TECHNOLOGIES IN TEACHING ENGLISH FOR SPECIFIC PURPOSES TO APPLICANTS FOR HIGHER VOCATIONAL EDUCATION

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This article offers a comprehensive examination of the theoretical foundations behind innovative technologies for teaching English for specific purposes in technical universities. The text provides a comprehensive overview of advanced and innovative teaching technologies. It offers practical recommendations for implementing these technologies in foreign language classes at an engineering university. Furthermore, it outlines a step-by-step procedure for their implementation and analyzes the outcomes of using these technologies. Lastly, it highlights the future prospects for the technological development of foreign language teaching processes in higher educational institutions.

The paper explores various innovative technologies for teaching foreign languages in non-language universities. These technologies include personality-oriented approaches, such as cooperative learning (Student Team Learning, Learning Together, Jigsaw), the technology of prospective-experiential learning, module-block and game technology, as well as problem-based and multilevel learning. The article emphasizes the close interaction of the mentioned technologies, highlighting the vital role of modern English teachers in higher education who apply a diverse range of teaching methods. This approach aims to prevent monotony in language learning, while also diversifying, interesting, and motivating students. Ultimately, it seeks to engage them in an intellectually creative pursuit of self-discovery and self-development. The authors emphasize the major impact of the innovative technologies mentioned and described in this paper on the effective teaching of foreign languages at the university level. It is crucial to emphasize that the availability of necessary resources and equipment is important, but what truly makes a difference is a gifted teacher. A teacher who possesses not only a profound understanding of these technologies but also has the ability to effectively apply them in the educational process, both in theory and, most importantly, in practice.

New innovative technologies are now actively used in foreign language classes in higher education. Using these technologies in lessons enhances the educational, informational, and emotional aspects, greatly boosting motivation to learn a foreign language and fostering the essential competencies needed. The technologies mentioned in the article enhance English for specific purposes teaching in technical universities and motivate students, creating a favorable learning environment. The research findings of this study have important practical implications, as they can be effectively applied in both classroom settings and extracurricular activities within the field of foreign language teaching in engineering university.

Keywords: innovative teaching technologies, teaching foreign languages, personality-oriented approaches, motivation, engineering university.

Пасічник М.В., Тупченко В.В. "Інноваційні технології в процесі навчання англійської для спеціальних цілей здобувачів вищої професійної освіти".

У статті проводиться комплексне дослідження теоретичних засад інноваційних технологій навчання іноземної мови в технічному вищому навчальному закладі. Висвітлено основні передові інноваційні технології навчання, запропоновано практичні рекомендації щодо їхнього застосування на заняттях з іноземної мови в інженерному університеті, розроблено процедуру впровадження конкретних технологій, проаналізовано результати використання описаних технологій, визначено перспективи розвитку технологічності процесу навчання іноземної мови у ЗВО.

У роботі розглянуто такі інноваційні технології навчання іноземної мови в інженерному університеті: особистісно-орієнтовані технології: навчання у співпраці (Student Team Learning,

Learning Together, Jigsaw), технологія перспективно-попереджувального навчання, модульно-блокова технологія, технологія проблемного та різнорівневого навчання. У статті наголошується, що всі зазначені технології тісно взаємодіють одна з одною, і тому сучасному викладачеві іноземної мови у ЗВО рекомендують застосовувати різноманітні технології навчання, щоб уникнути монотонності процесу опанування іноземної мови, урізноманітнити, зацікавити та вмотивувати студентів, долучити їх до інтелектуального творчого пошуку самопізнання та саморозвитку. Автори підкреслюють, що всі перераховані вище й окреслені в роботі інноваційні технології сприяють ефективному навчанню іноземної мови у ЗВО не тільки за наявності необхідних засобів і обладнання, а й передусім завдяки обдарованому викладачеві, який чудово володіє всіма прийомами та методами цих технологій, уміє застосовувати їх у навчальному процесі не лише в теорії, а й насамперед на практиці.

Нові інноваційні технології наразі активно використовуються на заняттях з іноземної мови у закладах вищої професійної освіти. Курс викладання із застосуванням зазначених технологій є більш насиченим у навчально-інформаційному та в емоційному аспектах, значно підвищує мотивацію вивчення іноземної мови, формує необхідні компетенції. Висвітлені в статті технології інтенсифікують процес навчання іноземної мови в технічному ЗВО, підвищують мотивацію та створюють особливе сприятливе навчально-освітнє середовище. Результати дослідження мають важливе практичне значення, оскільки можуть бути ефективно застосовані як в аудиторії, так і в позааудиторних заходах у сфері викладання іноземних мов в інженерних університетах.

Ключові слова: інноваційні технології навчання, викладання іноземних мов, особистісно-орієнтовані підходи, мотивація, технічний університет.

Problem statement. In the era of modern telecommunications, informatization, and globalization, along with the strengthening of intercultural relations, a new approach to defining the goals and objectives of higher education has emerged. Today, higher education institutions are prioritizing the development of a new breed of professionals who can effectively apply the theoretical knowledge they acquire in university to real-world scenarios. The main responsibility of a foreign language teacher in higher education is not just to teach students language skills, but to nurture and improve their communicative and intercultural competence. This entails providing them with the necessary skills to effectively communicate in a foreign language, such as English, during real-life speech interactions. Modern education is specifically designed to teach effective communication in a foreign language. Mastering language as a system is crucial for engaging in authentic communication on relevant and meaningful topics. Thus, the focus shifts from simply learning the language to mastering it through practical application in various real-life scenarios. Implementing these innovative technologies not only addresses the mobility constraints of modern society but also fosters a more dynamic and adaptable approach to language learning. In this context, higher education institutions have developed foreign language teaching technologies that create a new educational environment for real-time communication. These technologies provide a model for authentic professional situations, encouraging students to develop unconventional

creative thinking, teamwork skills, and the ability to take independent action. New technologies in teaching foreign languages effectively solve the problem of mobility of modern society, offering the possibility of distance learning. Modern innovative technologies are the advanced collective experience of effective application of certain methods of teaching a foreign language in a higher education institution within the framework of realization of the personality-oriented approach to learning.

The purpose of the article is to investigate the advantages and disadvantages of innovative technologies, their limitations and prospects for use in the practice of teaching a foreign language at an engineering university.

The statement of the main material. Innovation and novelties implementation in the educational process promotes the realization of successful professional activity of a lecturer. These innovations are a generalization of modern scientific and practical pedagogical experience of professional teams or individual specialists. In contrast to reforms in education, innovations in education are carried out not by public authorities, but by advanced educational and scientific staff and organizations. Academic literature distinguishes between the concepts of "innovation" and "novelty". The latter is a means, i.e. a new method, technique, technology, program, etc., whereas innovation is the process of applying a new means, method, technology, etc.[1,2]

One of the tasks of foreign language learning in higher vocational education is to carry out the process of lifelong learning. For this

purpose, high school specialists should introduce the students to advanced and innovative teaching methods. Among them are the techniques of working with information, creating new knowledge and maintaining the necessary level of knowledge about the developing world.

In this paper, we will explore the technology of teaching foreign languages in higher education, as we firmly believe that the university plays a crucial role in shaping professional competences. Upon graduating from high school, the prospective student possesses only a rudimentary understanding of a foreign language, which may not always enable them to adapt to the rapid advancements in the realm of science and technology. The study of a specialized foreign language, such as business foreign language, technical foreign language, foreign language for economists, foreign language for engineers, etc., is essential in preparing future skilled professionals.

The Ukrainian education system is dedicated to developing essential professional competencies in English language proficiency by incorporating innovative technologies. These technologies aim to foster the creative development of individuals in both intellectual and emotional dimensions.

All innovative technologies of teaching English in higher education can be conditionally divided into groups:

1. information and communication technologies (computer programs, multimedia, electronic textbooks, Internet resources, online dictionaries and libraries);

2. personality-oriented technologies encompass a variety of effective learning strategies that enhance the educational experience. These techniques include multilevel learning, engaging in research projects, problem-based learning, cooperative learning, modular block learning, game-based learning, perspective-oriented learning, and health-saving learning. By incorporating these innovative approaches into educational practices, students can acquire knowledge in a more enriching and impactful way.

All of these technologies are interconnected, making it essential for a contemporary English teacher in higher education to utilize a variety of teaching methods. By avoiding monotony in the foreign language learning process, this approach not only diversifies the learning experience but also intrigues and motivates students. It encourages them to engage in intellectual and creative exploration, leading to self-discovery and personal growth.

The personality-oriented approach in teaching belongs to the humanistic direction in pedagogy. Its main principle is that the learner (in our case, the student) should be at the center of learning, rather than the teacher. This approach emphasizes the cognitive activity of the student over the teaching activity of the teacher. This approach fully corresponds to the specifics of learning a foreign language: practical mastery and professional speech skills are only developed through direct practice in the foreign language. In higher education foreign language classes, it is crucial for students to actively engage in the practical application of the language material. This method places the responsibility on the students to engage in practical application of language skills, giving them agency in their own learning process. By implementing personality-oriented teaching, educators aim to address the challenge of activating independent cognitive speech activity in foreign language classes. This responsibility lies with the students themselves, rather than the teacher. Activation of such independent cognitive speech activity of students in foreign language classes is still the main problem of successful mastering of the subject. Famous methodologists and pedagogues offer to solve this problem with the help of personality-oriented teaching.

In modern methodological literature on teaching a foreign language at a higher education institution within the framework of the personality-oriented approach it is possible to distinguish the following personality-oriented technologies:

- **Cooperative learning**

The main principle of cooperative learning technology is active learning activity of students in different learning situations. The concept of cooperative learning involves the process of learning in small groups comprised of 3-4 individuals, where it is essential to have a high-achieving, average, and low-achieving student. Students are given the opportunity to complete specific tasks, with the success or failure of each group member impacting the overall success of the entire group. At the end of the assignment, all group members are awarded the same grade. Therefore, the highly proficient student demonstrates a keen interest in assisting the less skilled student in successfully completing the assignment. All group members understand new material together, learn new language material together, and work together to close gaps. This is the general idea of cooperative learning [3]. The practice of cooperative foreign language learning in higher education is the most interesting and effective. When we talk about the success of this

learning approach, we want to emphasize not only the achievements in learning activities, but also the development of specific personal and psychological skills that occur during collaborative activities.

There are several ways to organize cooperative learning technology:

1. *Student Team Learning (STL).*

The success of the entire group is the result of the independent work of each team member, who collaborates with others in constant interaction while working on a topic, problem, or issue to be studied. Each member of the team is responsible for ensuring that each of its members learns the necessary study material. The main principles of organizing work in an STL team:

-equitable incentives or rewards for all team members

-personal responsibility for the success or failure of the whole group;

- the performance of each team member is evaluated based on their own previously achieved results, ensuring equal opportunities for success for all [4].

2. *Learning Together*

The idea behind this type of organization of learning activities is to divide the entire class into groups of 3-5 individuals who have a similar level of proficiency in the foreign language. This not only enhances the learning process but also fosters a sense of camaraderie among the participants. Each group performs a part of its own task, which in its turn is a subtask to the general task of the class. For example, the whole class is given the task to develop a tourist route around Kharkiv. Sub-topics of this general theme will be tasks for individual groups (bus, cab, subway; visiting the Central Park, Mirror Stream, etc., boat trip on Lopan and evening Kharkiv, etc.). As a result of joint work of all groups, the assimilation of new educational material is achieved. When creating each group, the teacher should consider not only the students' level of learning, but also their psychological compatibility, their ability to work together to accomplish the group's task, and their active participation in discussing the overall lesson topic. In the end, the whole group receives one common grade. This approach not only encourages cooperation and teamwork among students but also fosters a sense of shared responsibility and accountability for the outcome, promoting a holistic learning experience. By integrating diverse perspectives and skill sets, the collaborative nature of this activity can lead to a more comprehensive understanding of the tourist route and the city itself.

3. *Jigsaw*

In this type of learning activity organization, all new learning material is divided into meaningful blocks. Each group member is given the task of developing the material of a particular block. Once the group members who have performed similar tasks come together, they can seamlessly exchange their valuable experiences, engage in detailed discussions, and collectively refine their innovative solutions. Upon returning to their group, the students eagerly share their new information with their fellow members, who then diligently record the details and contribute to the completion of their assignment. At the end of the lesson, the teacher leads an interactive session with all group members, asking thought-provoking questions about their individual assignments. In addition to this, the collective performance of the group is critically evaluated and assessed as a whole. We strongly urge members to incorporate supplementary details to enrich the answers within their respective groups. Furthermore, we also encourage members to ask questions to members of other groups.

The main advantage of cooperative learning technology is that it greatly increases student motivation. When tackling the lesson's general topic, weaker students can always rely on the assistance of their stronger peers. This is because individual performance directly impacts the overall outcome of the group. One positive aspect of this technology is the ability to provide personalized learning. While most students are occupied with their tasks, teachers have the time and opportunity to assist struggling students. The essence of the personality-oriented approach within the context of group work in the classroom

- The technology of **modular-block teaching** of foreign languages in higher educational institutions allows:

-mastering of a foreign language by students of different levels of preparedness;

-possibility of individual approach to teaching and assessment of knowledge of each student;

-motivated study of competences and topics of the module that are important for a particular student;

-development of the skill of independent cognitive activity, self-assessment and self-control;

-creation of psychologically-comfortable conditions at the level of control and independent work.

Module-based teaching is an innovative and personalized approach that empowers students to

take an active role in their learning journey. It allows them to choose tasks and topics, based on their individual level of proficiency in the foreign language. This method fosters a deep sense of ownership and motivation, as students become key participants in their own education. By tailoring the content to their specific needs, module-based teaching fosters a more meaningful and effective learning experience. This student-centric method creates a learning experience focused on the individual, enabling them to effectively master educational material according to their unique needs. Students can develop not only their academic skills, but also their creative, computer, and other personal skills while mastering the module [5].

Each module is a kind of curriculum, which combines the content and technology of mastering it. The content consists of informative blocks. Each module includes essential information about its purpose, educational materials for study, methodological guidance for students, and a task to assess mastery of the material. The teacher is also recommended to include tasks for creative information search and development of communication and computer skills. The teachers have the option to assess students' understanding of the material in a variety of ways. Students can present their knowledge through oral means, such as speaking about the topic individually or engaging in a dialogue. Alternatively, they can participate in an oral questioning-discussion session. Another option is to demonstrate their knowledge through a written answer. Additionally, there is the possibility of completing the assessment in an electronic distance format.

The module is composed of a series of lessons, typically spanning 2-4 sessions. Each set of lessons forms a compact unit, complete with its own organized framework.

A block of 4 modules will contain the following curriculum aimed at mastering the language material:

Module 1 (1-2 lessons) - teacher's explanation of new material, note-taking of new information in a notebook;

Module 2 (2-4 lessons) - actively applying the theoretical concepts through exercises and practical applications (answering questions based on the materials in the notebook, engaging in discussions and round tables, collaborating in small groups).

Module 3 (1-2 classes) - engaging activities for hands-on practice and reinforcement of the topic material, completion of individual tasks in the classroom or computer lab;

Module 4 (1-2 classes) - assessment of the studied topic through oral or written assignments in printed or electronic form in the classroom or at home.

Modular-block teaching effectively shapes and enhances key competencies including values, academic skills, information management, and communication. All the above competences are considered professionally significant and necessary for further self-education of students, mastering information technologies, teamwork skills. In modular study, knowledge is gradually accumulated as each subsequent module builds upon the material of the previous module. The undeniable advantage of this technology when studying a foreign language at the university is the ability to work at an individual pace on the educational material of the module, which is determined by the student. The ability to choose tasks and have non-assessment control within the module contributes significantly to increasing motivation for learning, while reducing fear and tension, often referred to as a psychological barrier, commonly found in traditional foreign language learning methods.

This individualized approach allows students to focus on specific language skills that they find challenging, and to progress through the material at a comfortable pace. In addition, the non-assessment control within the module provides a supportive environment for experimentation and learning without the fear of making mistakes.

- Technology of perspective-oriented learning

The primary goal of this technology is to ensure that all students can successfully master a foreign language, making knowledge accessible to everyone, and focusing on preventing mistakes rather than correcting them. Thus, the technology of perspective-oriented learning realizes the personality-oriented approach. At university it is one of the most effective technologies of foreign language teaching, which is explained by the following basic principles:

1) achievement of full or sufficient mastery of a new topic. Due to the overloaded curriculum, students often come to foreign language classes feeling tired and overwhelmed, which can make it challenging for them to concentrate on the subject and fully understand and absorb new, complex topics. Thanks to the application of the technology of perspective-overview teaching, the degree of low or insufficient understanding and assimilation of new material is reduced in students, because a new topic or difficult language material is

introduced gradually in previous classes, so that the explanation of this topic is already partially familiar and understandable for students and the result of assimilation is much higher than in the traditional lesson-by-lesson thematic planning.

2) accessibility of mastering a foreign language for students of different levels of training. In secondary schools, foreign language groups are typically arranged based on students' level of preparation. However, in engineering universities, the composition of groups tends to be much more diverse. Sometimes the situation is such that there are both very strong and rather weak students in the group. In this case, when introducing new language material (a promising topic), the teacher must rely on the strong students initially and gradually involve the others in the discussion [6].

3) a student in higher education spends a lot of time independently studying educational material. The instructor should seek the necessary feedback, guided by the student, in order to fulfill the task. All comments are made aloud, so that the whole class analyzes, complements or corrects mistakes. The instructor's role is to guide the discussion towards finding the correct solution. In the process of this discussion and identification of possible errors, students develop important professional skills: logical, critical thinking, and independent judgment, elements of self-knowledge;

4) reducing the time spent on explaining a new (prospective) topic. In a context of constrained time, a foreign language teacher at a technical university is confronted with the challenge of efficiently instructing students who possess varying levels of proficiency within a relatively brief timeframe. As we know, the key to successfully learning any foreign language lies in the ability to comprehend its structural organization, specifically its framework. The lexical material is gradually strung on the language "matrix". The organized layout of a foreign language entails the extensive utilization of diverse schematic representations of new content in both printed and electronically accessible formats. This is extremely effective for distance education purposes. The use of cards, reference schemes, drawings, and tables create visual representations that can significantly save time compared to the traditional method of explaining and writing in a notebook. In addition, a few reference charts can replace cumbersome textbooks, saving valuable study time, and maintaining high levels of learning motivation and the drive to master a foreign language.

Technology of multilevel training

The core concept of this technology centers around the notion that students, varying in language proficiency, require distinct durations of time to effectively grasp new material. The key to a successful assimilation of the curriculum lies in providing ample time that aligns with the abilities of each individual student within the group.

Another important principle of the technology of multilevel foreign language teaching in higher education is differentiated tasks. Differentiated tasks are a valuable tool that can be integrated into various aspects of teaching speech activities, such as reading, speaking, listening, and writing. These tasks address various levels of complexity and effectively cover all aspects of the language system, including vocabulary, grammar, phonetics, morphology, and word formation. By using differentiated tasks, educators can create a dynamic and inclusive learning environment that meets the diverse needs of their students, promoting growth and success in every aspect of language development. However, there is a difficulty in designing such assignments. The teacher must create differentiated tasks that, on the one hand, cater to individual personalities, and on the other hand, ensure that all students acquire the essential fundamentals of the curriculum. The technology of multilevel foreign language teaching in higher education can also be manifested in the fact that all students perform tasks of the same level of complexity, but with differentiated degree of teacher's assistance. Educators must prioritize the thorough consideration of each student's needs and abilities when crafting differentiated tasks [7]. Additionally, they should offer essential support and guidance to promote a prosperous and all-encompassing learning environment. Through the implementation of multilevel foreign language teaching in higher education, teachers can adeptly address the diverse needs of their students while ensuring a consistent level of complexity in the tasks.

Conclusions. Innovative teaching technologies have been actively used in foreign language classes in higher education. The use of these technologies enriches the educational experience by providing a wealth of information and fostering emotional engagement. It significantly increases motivation for learning a foreign language and helps to develop necessary competencies. However, it requires constant training and professional development from today's teacher. In order to achieve qualitative

sustainable mastering of a foreign language the teacher should consider the expediency of application of new innovative technologies, competently integrate them into the educational process detailed technologies contribute to the effective mastering of a foreign language in higher school, as they form and develop the basic language competences, namely communicative and cognitive skills, the skill of self-education and self-improvement. The technologies described greatly enhance the process of foreign

language learning in higher education. They not only increase motivation but also create a uniquely conducive learning and educational environment. Moreover, these groundbreaking technologies offer students tangible language practice, profound cultural comprehension, and chances to engage with native speakers of the target language worldwide. This kind of authentic interaction and exposure is invaluable in developing fluency and confidence in using a foreign language.

Список використаних джерел

1. Gilbert J. English for academic purposes / J. Gilbert // *Innovations in learning technologies for English language teaching*. – 2013. – Pp. 117-143.
2. Davis N. Technology in teacher education in the USA: What makes for sustainable good practice? / N. Davis // *Technology, Pedagogy and Education*. – 2003. – no 12(1). – Pp. 59–84.
3. Gillies R. M. Cooperative learning: Review of research and practice / R. M. Gillies // *Australian Journal of Teacher Education*. – 2016. – no 41(3). – Pp. 39–54.
4. Julie Yazici H. A study of collaborative learning style and team learning performance / H. Julie Yazici // *Education + Training*. – 2005. – Vol. 47, no. 3. – Pp. 216-229.
5. Jimma T. T. The Prevailing Practices and Challenges of Curriculum Reform in Ethiopian Higher Education: Views and Responses from Within / T. T. Jimma, W. M. Tarekegn // *Australian Journal of Teacher Education*. – 2016. – no 41. doi:10.14221/ajte.2016v41n10.6.
6. Sarobol N. Implementing Cooperative Learning in English Language Classroom: Thai University Students' Perceptions / N. Sarobol // *The International Journal of Interdisciplinary Social Sciences: Annual Review*. – 2012. – Vol. 6(10). – Pp.111–122.
7. Trokhymchuk S. Approaches to Foreign Language Teaching of Future Engineer-Teachers in the Context of Digitalization and Distance Learning / S. Trokhymchuk, O. Bryntseva, M. Pasichnyk // *Lecture Notes in Networks and Systems*. – 2023. – Vol 900. DOI: https://doi.org/10.1007/978-3-031-52667-1_7

References.

1. Gilbert, J 2013, 'English for academic purposes', *Innovations in learning technologies for English language teaching*, Pp. 117-143.
2. Davis, N 2003, 'Technology in teacher education in the USA: What makes for sustainable good practice?', *Technology, Pedagogy and Education*, no 12(1), Pp. 59–84.
3. Gillies, RM 2016, 'Cooperative learning: Review of research and practice', *Australian Journal of Teacher Education*, no 41(3), Pp. 39–54.
4. Julie Yazici, H 2005, 'A study of collaborative learning style and team learning performance', *Education + Training*, Vol. 47, no 3, Pp. 216-229. DOI <https://doi.org/10.1108/00400910510592257>
5. Jimma, TT & Tarekegn, WM 2016, 'The Prevailing Practices and Challenges of Curriculum Reform in Ethiopian Higher Education: Views and Responses from Within', *Australian Journal of Teacher Education*, no 41, DOI: 10.14221/ajte.2016v41n10.6.
6. Sarobol, N 2012, 'Implementing Cooperative Learning in English Language Classroom: Thai University Students' Perceptions', *The International Journal of Interdisciplinary Social Sciences*, Vol. 6(10), Pp.111--122.
7. Trokhymchuk, S, Bryntseva, O & Pasichnyk, M 2024, 'Approaches to Foreign Language Teaching of Future Engineer-Teachers in the Context of Digitalization and Distance Learning', *Lecture Notes in Networks and Systems*, vol. 900. DOI: https://doi.org/10.1007/978-3-031-52667-1_7

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