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INTELLEKTUELLES KAPITAL - DIE GRUNDLAGE FÜR INNOVATIVE ENTWICKLUNG

TRANSFORMATION DER HOCHSCHULBILDUNG IN DER UKRAINE: KOMMUNIKATIVE, DIGITALE UND NICHT-FORMALE STRATEGIEN FÜR DAS ZEITALTER DER KÜNSTLICHEN INTELLIGENZ

INTELLECTUAL CAPITAL IS THE FOUNDATION OF INNOVATIVE DEVELOPMENT

TRANSFORMING HIGHER EDUCATION IN UKRAINE: COMMUNICATIVE, DIGITAL, AND NON-FORMAL STRATEGIES FOR THE AGE OF ARTIFICIAL INTELLIGENCE

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Introduction

The advent of computer technology represents one of the most substantial technological achievements of modern civilization. The processes of digitalization are having a significant impact on various aspects of 21st-century human life. Education is one of the fastest-changing areas in terms of technology. The advent of multimedia tools has significantly altered the manner in which information is acquired and assimilated, creating new avenues for integrating disparate actions, and thereby facilitating the achievement of socially significant and relevant learning objectives. The rapid development of technology creates the conditions and opportunities for everyone to be continuously educated in the digital educational space.

Educational technology, also known as learning technology, refers to the use of technology to enhance learning and improve achievement. It involves the creation, use, and management of technological processes and resources that facilitate student-centred learning. Rather than relying on traditional teaching methods, educational technology encourages teachers to become guides who support student learning. This includes the use of tools such as laptops, interactive whiteboards, smartphones, the internet, and Wi-Fi, as well as effective learning management systems and feedback mechanisms. Additionally, educational technology encompasses information dissemination schemes, effective teaching and student management strategies, and performance assessment methodologies. These technologies are preferred by today's students due to their potential for enhancing the learning experience. Overall, educational technology aims to transform the teaching and learning process by

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integrating digital tools and innovative methods.

As indicated in the Global Education Monitoring Report (2023), the sub-sector of higher education has undergone the most significant digitalisation, with online management platforms replacing traditional campus-based learning environments. There has been a notable increase in the utilisation of data analytics in educational management. Technological advancements have expanded the scope of learning opportunities, necessitating a more robust preparation of education systems to effectively integrate digital technologies into their pedagogical practices. This integration should align with the best interests of all stakeholders, including students, teachers, and administrators.

The use of technologies to support teaching and learning is a multifaceted phenomenon. Digital technologies offer two broad categories of opportunities. Firstly, they can enhance learning by addressing quality gaps, increasing opportunities for practice, increasing available time and personalizing learning. Secondly, they can engage learners by changing the way content is presented, stimulating interaction and encouraging collaboration [17].

The transition to innovative teaching methodologies in contemporary education has given rise to the paradigm shift towards online learning, which facilitates student participation in lectures from any global location. This transformation has fundamentally reshaped the educational landscape, situating the individual learning requirements of the student at the epicentre of the educational process.

Modern education aims to develop vital skills such as critical thinking, problem solving, creativity and adaptability, enabling people to be lifelong learners in a dynamic world. It also emphasises the importance of ethics and social responsibility, enabling graduates to make informed choices that have a positive impact on themselves and their communities. By promoting a holistic approach to education, modern systems aim to develop well-rounded individuals who are ready to face global challenges and help build a more sustainable and equitable future.

1.1. The current state of online education in Ukraine

Over the past few years, the concept of online learning has become a well-established practice in various educational institutions. Ukrainian students made their first attempts to study online during the Covid period. At that time, online lessons were a forced decision due to the epidemiological situation and quarantine in educational institutions. The war in Ukraine has brought a number of new challenges for the higher education system in our country. Among these challenges is the need to further develop online education and the use of modern technologies. In Ukraine, the majority of higher education institutions currently offer educational programs in a mixed or exclusively distance format. Having experienced the transition from full-time education with fragmented use of IT technologies to blended learning (with parallel use of synchronous and asynchronous teaching methods) during the quarantine period, higher education institutions (99.8%) easily switched to distance learning under martial law.

The Ministry of Education and Science of Ukraine is actively working to develop Ukraine's digital education infrastructure. Thanks to new forms of cooperation such as Zoom, Microsoft Teams, Skype, etc., the efficiency of communication between higher education institutions has improved and the network of interaction between universities has expanded. Now universities can hold joint events even when they are located in different cities within Ukraine or even in other countries. Potentially, such cooperation creates a common information space and a single cohesive network of connections. Popular e-learning platforms such as HUMAN, Prosvita, Google Classroom, MOODLE, New Knowledge, Mozaweb, GoogleDoc, Paint, Conceptboard, Liveworksheets, LearningApps, Nearpod, Kahoot, Classtime, Padlet, Easy test maker are also being developed. Development of the platform for professional qualification candidates "Professional Education Online", free access to Coursera, Udemy, and EdX courses for Ukrainian students and higher education institutions, launch of e-textbooks, and e-library with the support of partners and donors; extension of Zoom Meetings for Education licences with extended access to Large Meeting - all contribute to the expansion of high-quality online education in Ukraine [11].

The changes currently taking place are resulting in an increased focus on online learning and teaching approaches. There are two forms of online learning that must be considered in the context of the programme of study: synchronous and asynchronous. A synchronous session is one that takes place jointly and simultaneously with a group of students and a teacher in real-time. Synchronous learning is analogous to the traditional model of learning in a higher education institution, differing only in that the participants of the online session are typically at a distance from each other. It is also noteworthy that, in contrast to classroom teaching, the teacher is unable to look into the eyes of the students and ascertain whether they are listening, which places the onus on the students to be fully engaged. An asynchronous session may be conducted at any time, independently of the presence of other students, with the provision of feedback from the teacher. Asynchronous classes are conducted on the principle that teachers present material, lectures, tests, and assignments that can be accessed at any time [4].

Online education has become an integral part of the educational space in Ukraine and around the world. This has happened both at the state level and at the level of private educational institutions. A special feature of online learning is its practicality, convenience and new competitive advantages (primarily for students) that can be used in future employment [13].

In general, it can be stated that the field of online education in Ukraine is characterised by the following features:

- Active learning. Modern online education emphasizes active learning, where students actively participate in the learning process. They do not just passively listen to lectures, but actively participate in discussions, solve problems, conduct research and apply their knowledge in practice. This approach allows students to develop critical thinking, analytical skills and independence.

- Use of modern technologies. Modern online education makes extensive use of technology in teaching and learning. Students have access to the Internet, e-textbooks, online courses and other electronic resources that allow them to get information and learn anytime and anywhere. This approach allows students to be more flexible and independent in their learning.

- Development of communication skills. Modern online education challenges students to develop communication skills. Students learn to work in a team, communicate with teachers and other students, make presentations and engage in constructive debate. Such skills are important for a student's future career and help them to interact successfully with others.

- Development of creativity and innovation. Modern online education encourages students to develop creativity and innovation. It stimulates students to think outside the ordinary, to search for new solutions and to propose innovative ideas. This approach allows students to develop their creative thinking and be prepared to solve complex problems in their future professional life.

The conceptual foundations of the modern paradigm of higher education in Ukraine can be defined as follows: the use of information technology, the development of professional competence, the application of technology, the process of digitalisation, the promotion of innovation, the promotion of scientific activity, the continuity of the educational process, the provision of security and stability, the promotion of internationalisation and integration, and the prioritisation of humanisation. The modern paradigm of higher education is defined by a fundamental commitment to integrity, operating in the context of global challenges and ongoing conflicts. The following components are included: core values, criteria and functions, motivations, norms, tasks and goals, teacher-student interaction, style of management of the educational process, motivational and semantic attitudes of the teacher, educational content, forms and methods of teaching, teaching aids, control and assessment, and learning outcomes. Each of these components fulfils a specific function and ensures the viability of the higher education system [3].

Contemporary educational theory has transformed the entire system, modifying teaching and learning methodologies to align with the requirements of contemporary society. It can be argued that modern online education plays an important role in the development of present-day students. It helps them not only to acquire the necessary knowledge and skills but also to develop as individuals, to be prepared for their future career and to interact successfully with other people.

1.2. The modern generation of students and their learning habits

A student is a member of 21st-century society who is engaged in the process of self-discovery, seeking to establish their identity and position within the social structure. They are driven by a desire to differentiate themselves from others, to demonstrate their capabilities and to assert their desired social status. The student's age is distinguished by a number of distinctive characteristics, including an active engagement with the external world, a proclivity towards self-discovery, and a tendency towards self-determination and self-assertion.

Today's generation of students is Generation Z, also known as the "Zoomers," individuals born after the year 2000. They are a generation that has mastered digital technology from an early age. Their world is social media, getting information through friends' links, and the cultural approval of "liking". These are people who cannot imagine themselves without the internet, gadgets, and social media and quickly master any technological innovation. They use the Internet for entertainment, communication, education and work with great ease.

They engage in multiple tasks simultaneously, prioritizing those that align with their interests. Zoomers require knowledge to complete specific tasks and demonstrate enhanced visual information processing abilities. Their brain activity differs from that of students from twenty years ago, with the visual processing region of the brain being particularly developed. Consequently, students respond best to visual learning

It seems that Generation Z is not very fond of communication. However, this is not the case. All communication has moved to the virtual environment, and students want to get feedback from their teachers more than ever [5].

Ashley Fell identifies five characteristics of today's students:

• Social: technology now makes it possible to access content anywhere, anytime, and in highly visual and engaging formats. This creates the flipping of education, where learning occurs outside the classroom, but engagement and practice still take place in the classroom.

• Mobile: besides interacting through technology, students today are mobile when

it comes to their jobs and their homes. To prepare this generation for a world that is changing, it is important to equip them not just with content, but with resilience.

• Global: the contemporary student population is unquestionably globalised, with the potential to work in multiple countries. It is the most globally connected and influential generation in history, transcending local boundaries and embracing a global outlook that has never been seen before.

• Digital: they are learning not only with pen and paper but also with iPads and screens designed to display visual as well as written information. They need both literacy and digital skills.

• Visual: in an age of information overload, messages are increasingly visual, with signs, logos and brands breaking down language barriers with colours and images rather than words and phrases. Visuals are also the way the brain processes information best [16].

The period of study at university represents a unique opportunity for young people. It is important to recognize that this period of life should not only be used to prepare oneself for the role of a professional but also to gain the psychological knowledge that is so necessary for a career. This can be achieved by developing communication, interaction, adaptation and influence skills.

Students play a key role in the modern educational process. They are active participants in the learning process and possess their own characteristics, which are important to consider when planning and conducting lessons.

The modern student faces a number of challenges that can impede their online learning and affect their success. Some of these challenges include [15]:

• Information Overload. The modern student has access to a vast amount of information from a diverse range of sources, including the internet, books, and magazines. However, this can result in information overload when students encounter difficulties in selecting and organizing the information they require.

• Distractions. The modern student is often faced with distractions such as social media, messengers, online games, etc. These factors can take away a student's time and attention, making it difficult for them to concentrate and be effective in

their studies.

- Stress and pressure. The modern student is often stressed and pressured by high expectations from family, society and the student's self. The pressure of studying, deadlines, exams and other commitments can make a student feel anxious and insecure.

- Lack of time. The modern student is often pressed for time due to a heavy workload of study, work, social activities and other commitments. This can hamper his or her ability to study effectively and to allow sufficient time for recreation and self-development.

It is important that students recognize these problems and develop strategies to overcome them. This may include planning time, setting priorities, and using technology to improve organization and concentration.

The modern student represents hope, promise, and boundless potential. Rather than passively awaiting the future, they are actively engaged in shaping it. Their distinctive combination of creativity, unwavering commitment to community, and relentless curiosity signals a promising era of progress and unity [25].

Thus, a modern student is an active participant in the educational process who has certain characteristics and qualities. He or she uses various technologies for learning, faces certain problems and interacts actively with social networks. An important aspect for the modern student is self-education, which allows him/her to develop and achieve success in his/her professional career. In addition, today's student is increasingly aware of global issues and wants to contribute to positive change in his/her communities and the world at large. He/she seeks opportunities for collaboration, innovation and critical thinking, and actively shape his educational pathways to meet individual aspirations and career goals. Modern education plays an important role in the formation and development of the modern student, providing him/her with the necessary knowledge and skills. In general, the modern student is an active and adaptive participant in the educational process, who strives for personal and professional growth.

1.3. The role of a teacher in online education

It is now widely acknowledged that distance /online learning has the potential to deliver a wealth of information and equally amazing services. However, regardless of the specific features offered by a given learning tool, the role of the teacher remains a critical one. According to Robbins "at the heart of the language learning process, making optimum use of the latest technologies and striving to implement the best pedagogical approaches, is the teacher" [21].

In the classical sense, pedagogical skills include a number of structural components: moral and spiritual qualities (dignity, intelligence, conscience, honesty), professional knowledge (knowledge of the subject, psychology, pedagogy), social and pedagogical qualities (endurance, patience, integrity, tact), psychological and pedagogical skills (communicative, didactic, suggestive abilities), pedagogical technique (such as one's appearance, language culture, and emotional control) [14].

The primary responsibilities of university teachers encompass a range of functions, which may be classified as specific types of professional pedagogical activity. These include:

• The teaching activity of a university teacher is aimed at the transfer of knowledge, the formation of skills and abilities, and causing students to take actions leading to the assimilation of educational material.

• The educational activity of the teacher is concerned with the fostering of high moral, mental, volitional, aesthetic and other qualities in students, with the objective of ensuring their all-round personal development.

• The scientific research activity of a teacher is the activity of a scientist in the field of the discipline taught. In addition to being an expert in his field, the teacher engages in scientific research that enhances the course with novel insights.

• The organisational activity of a teacher encompasses the organization of classes, the independent work of students, the monitoring and evaluation of students' work, and the arranging of consultations.

The Internet, with all its capabilities and resources, is only a tool that foreign

language teachers can use to achieve their objectives. Consequently, the role of the foreign language teacher in online learning is evolving. In addition to the traditional role, there are a number of other roles that teachers can adopt. These include the teacher-consultant, who either possesses a ready-made solution or has ways of doing things that demonstrate how a problem can be solved; the teacher-moderator, whose activities are aimed at revealing the potential of the student and their abilities; and the teacher-tutor, who provides pedagogical support to the student. The relationship between teacher and student is based on the principles of cooperation and joint creativity. At the same time, teachers are required to have deeper knowledge and skills in organizing work in the telecommunication environment within the framework of the set didactic tasks:

- knowledge of the purpose, structure and functioning of the communication environment;

- knowledge of the main network information resources and features of working with them;

- knowledge of the peculiarities of organizing and conducting online projects;

- knowledge of the peculiarities of organizing and conducting thematic conferences;

- knowledge of methodological principles of organising the work of teachers and students on the network;

- knowledge of the basic rules of behaviour on the network, the basics of Internet etiquette;

- ability to prepare information using a text editor, a graphic editor and the necessary utilities.

The role of the teacher in an online classroom differs from that of a teacher in a regular classroom environment. This distinction is particularly evident in the following areas:

- A proper guide: the teacher needs to play the role of guiding students through one or more online learning experiences.

- Motivator: an effective online teacher needs to make good efforts to communicate

specific encouraging messages to individual learners.

- Role model: the teacher can be massive support systems for students, help online learners develop high levels of confidence

- Individual Mirror: providing feedback is an important duty of online teachers

- Co-learner: teachers need to train themselves first before taking any online classes. Thus, they need to be lifelong learners.

- Effective communicator: Teacher-to-student and student-to-student communication play a vital role in an online learning environment [22].

Consequently, the digital environment is transforming the learning system and the approach to the educational process. There is a transition to a more flexible, variable, and adaptable learning system. As a result, not only the learning process, but also the activities of the teacher become flexible, and the effectiveness of their work depends on their ability to adapt methodological approaches and teaching materials to the capabilities, goals and competencies of students.

Online learning defines the main role of the teacher as the designer of the learning environment. Today, thanks to the advantages of modelling, communication technologies and interfaces, the teacher has the opportunity to design environments that are closer to real-world conditions. The second main role of an educator is that of a practitioner of the discipline. In the modern era, for successful and effective professional activity, an educator is obliged to utilise all the opportunities provided by information technology. The educator's functions include the following: coordinating the cognitive process, adjusting the course being taught, advising on the preparation of an individual curriculum, and managing educational projects [5].

In modern conditions, without mastering pedagogical skills, extensive knowledge of psychology and pedagogy, without learning to apply them critically and creatively in work with students, it is impossible to solve the problems of education and upbringing correctly and effectively.

Personal qualities in the teaching profession are inseparable from professional qualities. Among them are: mastery of the subject of teaching, methods of teaching the subject, psychological training, general erudition, broad cultural outlook, pedagogical

skills, mastery of technologies of pedagogical work, organizational skills, pedagogical tact, pedagogical technique, mastery of communication technologies, and public speaking.

The modern teacher's personality is shaped to a significant extent by their erudition and high level of culture. In order to navigate freely in the modern world, it is essential to possess a broad range of knowledge.

A modern educator is obliged to improve his or her professional competence through continuous training and self-education. Those teachers who are engaged in ongoing professional and personal development, engage in critical analysis of their practice and collaborate with others demonstrate high-quality pedagogical work. They exemplify the value of lifelong learning and contribute to the enhancement of their professional practice and the status of their profession through active participation, critical reflection, and partnership with others.

Each new generation of learners will bring changes to teaching and learning. Consequently, teachers will be obliged to adapt their teaching style in order to accommodate the interests, challenges and goals of their students. However, one constant that will remain is the trend towards a more digital world.

It should be noted that teachers of the 21st century are in a difficult situation: they have to adapt on the go, change the forms and methods of teaching a new generation of students, create more comfortable conditions for the perception of educational material by modern students, while urgently mastering digital technologies, expanding their skills in working with multimedia and gadgets, trying to keep up, or even better, keep pace with their students.

1.4. Foreign language training for students of non-linguistic specialities.

Nowadays, foreign languages are becoming a leading discipline on par with specialized subjects, as the value of a graduate in the labour market in the context of active development of international contacts is largely determined by the level of

language training of a young specialist. The university years are the time when social maturity is formed in an active way, which we consider to be the ability of a young person to master the set of social roles required by society.

The knowledge of a foreign language is important as a general cultural competence, a general professional competence and a sub-professional competence. An educational organisation should prepare each student for the realities and needs of the modern labour market and professions of the future.

The modern concept of language teaching in a non-linguistic university implies the creation of a flexible teaching technology, differentiated in content, methods and training conditions, which allows young professionals to adapt quickly to the conditions of the new cultural and information space.

The current trends in foreign language teaching at non-language universities are aligned with those observed in professional education and training. The most important of these are: orientation to international requirements and standards, professional orientation, development of independence, self-education skills, use of active methods in the formation of foreign language communicative competence, use of information technologies and technical means of learning, and provision of additional educational services.

Online learning, being a motivating factor in learning English as a foreign language, contributes to the achievement of personal, meta-subject and subject-specific learning outcomes at a university. Furthermore, it is a significant indicator of the contemporary era that students at technical universities are themselves coming to recognise the importance of learning a foreign language.

One of the new requirements for teaching foreign languages using online resources is interactivity. This can be defined as the ability to interact, to engage in a conversation or dialogue with another individual. In essence, interactive learning is dialogue learning, in which the teacher interacts with students.

The primary objective of learning a foreign language is the development of a range of speech activities, commencing with oral communication and concluding with the acquisition of abilities to work with text in a variety of ways, including the

extraction of information and the formulation of statements based on this information. The effectiveness of online learning is directly dependent on the teacher's ability to construct an optimal system for the development of specific components of English-language communicative competence, as well as the learner's interaction with effective digital resources.

When learning a foreign language, students need to be in the language space as much as possible. Live communication, listening, reading and writing in a foreign language play a very important role for them. In this case, thanks to technology, we have ample resources for listening and reading as well as speaking and writing. Indeed, the use of video, especially when students can access it outside the classroom, can provide individualized access to students' learning experiences.

The objective of foreign language training at a technical university is to provide students with the skills to engage in professional, intercultural communication. A specialist should be able to articulate their ideas effectively, defend their position and engage in constructive dialogue with international colleagues. Furthermore, a professionally oriented foreign language provides the opportunity to expand the field of information activity, systematically replenish and improve one's professional knowledge in a systematic manner.

Principles of teaching English at a non-linguistic university should take into account both the professional specifics and the tasks of the students' professional activities, therefore a professional approach is particularly relevant in the teaching of English. The basis of this type of training is to take into account the students' needs in learning English, which are dictated by the peculiarities of the future profession.

The primary objectives of professionally oriented foreign language teaching are as follows:

- to develop communication skills and abilities, including the ability to read, translate, analyse and process texts in a foreign language, as well as the ability to communicate in that language;
- to develop research skills;
- to facilitate the acquisition of socio-cultural knowledge.

According to Halytska, foreign language communicative competence is a complex, systemic formation, with a structure comprising discrete components: linguistic, language, socio-cultural and intercultural.

- The linguistic component encompasses the enhancement of vocabulary, grammar, semantics and phonology. It is developed to the extent necessary for oral and written communication within the academic and professional environment, in accordance with the level of language proficiency of higher education students.

- The language component (improvement of speaking, listening, writing, and reading skills) is the ability to use language material to achieve communicative, informative, cognitive, suggestive and other purposes. The language component implies that the speaker has a wealth of language skills, speech norms, stylistic and genre diversity, and forms of speech (oral and written). It provides the speaker with the ability to use language material accurately, to choose the appropriate style and genre, and linguistic means in accordance with the topic and purpose of the statement.

- The socio-cultural component is a fundamental aspect of foreign language communicative competence, without which foreign language communication will be ineffective or not take place at all. The socio-cultural component contributes to a more conscious and effective mastery of a foreign language as a means of communication. The primary motives for learning a foreign language are the desire to expand one's perspective, interest in the culture of the native speaker, country, and linguistic realities of the country whose language is being studied.

- Intercultural component. All issues related to culture have become extremely widespread in our time. The growing interest in the study of cultures of different nations, as evidenced by the increased number of publications on the dialogue of cultures, demonstrates a genuine interest in cultural issues [2].

The experience of teaching a foreign language (English) and a foreign language for professional purposes in higher education institutions demonstrates the necessity to increase the number of classroom hours allocated to the discipline, introduce intensive teaching methods and technologies that allow for the most accurate approximation to

real-life communication situations of professional and academic purposes. Close cooperation with specialised technical departments is an important condition for the quality of foreign language training at technical universities.

The study of a foreign language at the university level encompasses more than merely practical classes. In order to foster further student motivation, a variety of student work competitions are held at the university, national, and international levels. These competitions encourage students to engage with subjects that resonate with their personal interests, leading to a conscious decision regarding the forms of participation they choose.

It should be noted that online learning can have a positive impact on the psycho-emotional state of students. Learning a foreign language in an online format can facilitate the removal of psychological barriers and emotional stress, encourage the expression of creativity, instil a sense of psychological security, and enhance students' communicative activity.

1.5. Modern pedagogical technologies for teaching foreign languages

The development, improvement and optimisation of foreign language teaching methods has consistently been a significant challenge in higher education. Optimisation in general can be defined as the selection of the most favourable option from a range of potential conditions, means and actions. When applied to the online learning process, optimisation can be understood as the identification of a methodology that ensures optimal outcomes with minimal time and effort for both teachers and students, given the constraints of the given conditions.

The innovative learning technology comprises the following features [9]:

• modernity - a constant desire for innovation and continuous improvement of the subject content, taking into account the reduction of the gap between the latest achievements in science and production;

• optimality - an attempt to achieve the set educational goals with the least possible

effort, time and money, due to the high quality, efficiency and effectiveness of learning;

•   integrity - synthesis of knowledge gained not only in one subject, but also in other subjects;

•   scientific nature - rejection of intuitive determination of the content, methods and forms of education and transition to the most complete analysis based on the latest achievements of psychological and pedagogical sciences;

•   reproduction of the learning process and its results;

•   programming the activities of teachers and students;

•   large-scale use of modern technical and didactic teaching aids that activate students' activities;

•   optimisation of the material and technical base;

•   qualitative and quantitative assessment of learning outcomes.

The current trends in foreign language teaching are characterised by a radical transformation of the methodological paradigm and a significant technical advancement in the learning process. This is reflected in the massive onslaught of new teaching tools, primarily multimedia computer programmes, the Internet, and multimedia textbooks. The latest advances in high technology offer foreign language teachers the greatest opportunities to further improve the learning process and elevate it to a qualitatively new level. The technological possibilities of multimedia are considerable, as they facilitate the organisation of a diverse range of learning activities for students, thereby enhancing the efficiency and motivation of learning.

The process of developing students' foreign language proficiency incorporates the use of digital technologies, which facilitate convenience and flexibility within the context of the educational process. These technologies are increasingly attracting the attention of educators and enable students to engage with the subject in a more comprehensive manner. The systematic integration of modern information and communication technologies equips students with knowledge and skills, fostering greater autonomy and responsibility in their academic pursuits.

Among the modern pedagogical technologies, the most interesting for teaching

are those that are focused on group work of students, cooperative learning, active cognitive process, and work with different sources of information. These technologies involve the widespread use of research, problem-based methods of applying the acquired knowledge in joint or individual activities, the development of not only independent critical thinking, but also a culture of communication, and the ability to perform various social roles in joint activities.

Nikolenko notes that the use of interactive information and communication technologies and e-learning platforms have become the basic tools of online learning. They make it possible to create conditions for a modern model of the educational process, such as:

- free and positive atmosphere;
- ensuring equality of participants;
- awareness of the value of collectively learned conclusions;
- ensuring free exchange of opinions and acceptance of positions;
- recognising the teacher not as an instrument of "praise and punishment", but as a mentor and advisor [10].

Today, the importance of the humanitarian component of engineering education in a technical university is obvious. A foreign language occupies one of the key positions in an engineer's education. The need for mastery of key communication skills in a foreign language is an indisputable fact today, on the one hand, and the limited number of classroom hours for a foreign language, on the other hand. In this contradictory situation, foreign language teachers are forced to look for ways to develop the students' readiness for professional interaction. In addition, there are such problems as different levels of students' knowledge, an increase in the proportion of independent work, and a difference in the approach to teaching a foreign language in the school system and in the university. Trends in foreign language teaching in higher education institutions are aimed at developing active learning, where the student is not an object but an active participant in the educational process, where technological innovations modernize the present-day process of foreign language teaching. The priority is given to the student's active intellectual activity, and the teacher plays the

role of a supervisor who provides well-chosen and goal-oriented teaching methods.

The advanced use of 21st-century technologies, including webinars, blogs, Twitter, video and audio podcasts, in both asynchronous and synchronous modes, in the process of teaching foreign languages offers educators the opportunity to model communicative problematic learning situations. This, in turn, increases students' motivation to learn, encourages them to take a fresh look at the subjects being studied, thus unlocking their intellectual and creative potential. Artificial intelligence (AI) technologies are transforming foreign language learning at technical universities, making it more personalised, adaptive and effective.

In a technical university, professionallyoriented foreign language teaching should include some particularly important guidelines, namely: professionally- oriented learning context and development of students' professional motivation; maximum involvement of students' independent work; a source of professionally oriented textual material; identification of an effective way of combining auditory and visual channels of information input and perception; organisation of students' extracurricular independent work [1].

Since the objective of teaching a specific language in non-linguistic universities is to prepare students for a particular profession that requires proficiency in a foreign language, a substantial portion of the lesson is dedicated to emulating professional activities, such as report preparation or active participation in a discussion.

It is common for non-linguistic universities to limit the number of hours dedicated to foreign language studies within their academic programmes. Therefore, it is necessary to enhance the students' language skills through extracurricular independent work by integrating the latest educational technologies into the process of traditional teaching. The independent performance of tasks encourages the development of self-reflection, enabling students to analyse their own independent activity, implement corrections and express their opinions. It is essential to cultivate students' enthusiasm for independent study, self-regulation skills, and the capacity to assess their own performance throughout the learning process and at the conclusion of the programme, employing a range of assessment techniques. This approach enables students and

educators to access diverse information sources. The unique possibilities offered by information technologies, especially the Internet, which can be used by all the participants in the educational process, enabling the promotion of independent student engagement within the context of carefully designed activities.

The use of English is not limited to academic lessons. Extracurricular activities have a significant impact on encouraging students at technical universities to learn foreign languages. One of the most effective ways of encouraging foreign language learning is through participation in various competitions, projects and contests. By participating in such events, students are given the opportunity to demonstrate their skills and creativity, which makes the learning process more attractive and meaningful.

The organization of student independent work is crucial for maximizing efficiency in the teaching process. This involves focusing on active educational activities, fostering cooperation and co-creation between teachers and students, and using various methods of intervention. Teachers should act as teachers-managers, providing necessary teaching aids and fostering individuality development. Educational materials should be used as tools for organizing activities, not as learning goals.

Technology in online education implies some changes in the methods of teaching foreign languages:

• the presentation of ready-made information requires a certain level of self-discipline from the student;

• practical work is much more complicated; it requires the teacher to develop detailed step-by-step instructions and in-depth consultation on how to perform the work;

• tests are used for the convenience of checking and completing tasks.

Today's students respond best to visual learning. Therefore, it is necessary to provide students with as many materials as possible, such as illustrations, infographics, diagrams, videos, and programmes. The online environment and special applications give teachers the opportunity to use more visual and practical materials in the discipline [5].

The integration of Internet-based resources into the English language learning process can facilitate the more effective realization of didactic tasks. These include:

- the formation and enhancement of reading, listening, oral presentation, and the ability to engage in dialogue;

- the improvement of written language proficiency;

- the expansion of vocabulary;

- the activation of students' cognitive abilities;

- the engagement of passive learners in the learning process;

- the formation of a stable motivation to learn a foreign language;

- the acquisition of knowledge about the cultures and traditions of other countries;

- make classes more visual;

- provide instant feedback;

- increase the intensity of the learning process.

The advantages of using information technology compared to traditional methods are the combination of audio and video visibility, the possibility of using an interactive whiteboard, ensuring the effectiveness of perception and memorisation of educational material, and saving teaching time.

Google Classroom is one of the most popular educational resources among university foreign language teachers. Google Classroom is a free web-based service developed by Google for various educational institutions. It makes it easy to create, distribute and assess assignments in a paperless way and facilitates file sharing between teachers and students. Google Classroom is a very convenient digital tool for the administration of online learning. t facilitates the convenient organisation of assignments and materials in a real-time environment, even in the absence of the student. At the same time, it makes the whole learning process more interesting and more mobile, which is very important for modern teaching methods.

The success of learning to communicate in a foreign language is significantly influenced by the effective organisation of group work and the communicative orientation of the educational process in general. It is evident that the success of the teacher-student collaborative activity is largely dependent on the organisation of this

process. This is where the ability to work independently becomes crucial. Teachers are tasked with the challenge of organising students' learning activities in a manner that ensures optimal motivation to learn.

In group or collaborative work, students focus on the content rather than the form of the communication. The aim of the collaborative activity is important: to learn new information and to record and evaluate it, to discuss problems together, to compare different opinions and to take part in a discussion. In the process of carrying out interactive tasks, students show creativity and independence rather than being passive performers of speaking tasks.

Independent work should be related to and continue the topics covered in the textbook. Online tasks should develop the theme of the lesson and help students to practise grammatical structures, language models and expressions related to the topic.

Educators and methodologists believe that the future of the educational process belongs to online resources. Although the use of this type of technology in the classroom requires serious technical training and the capacity of the educational institution, it increases the effectiveness of the educational environment.

The effectiveness of online language learning is contingent upon the comprehensive and clear presentation of materials, as well as the creation of a sufficient number of resources to organise effective and quick access to the necessary information for students.

The use of innovations, which in turn provide for the introduction of interesting methods and ways of learning, is one of the important external conditions for ensuring successful learning by university students. In the field of higher education, the rational use of modern information technologies opens up entirely new possibilities.

1.6. Examination of knowledge

In the course of studying the discipline of "Foreign Language", the student is required to complete a series of tasks in accordance with the curriculum of the

discipline in the field (speciality) of higher professional education. Students' progress is assessed in accordance with the grading system for assessing learning outcomes. This is a comprehensive system of gradual assessment of students' mastery of the discipline, in which the content of the discipline is divided into credit modules and regular monitoring of students' knowledge and skills is carried out during the semester. Assessment and learning are interrelated processes. There are three interdependent types of assessment: diagnostic, formative and summative. Without the results of the diagnostic assessment, the teacher will not be able to apply the formative assessment at the proper level, and the quality of the formative assessment in the classroom will affect the results of the summative assessment. By maintaining this sequence during assessment, a high level of learning can be achieved. It is important to note that formative (internal) assessment is a crucial aspect of foreign language teaching. This assessment is conducted by the teacher who is directly involved in the educational process, with the aim of evaluating each student's individual progress and achievements. In accordance with the findings of Sergeyev and Roshchupkin, the consideration of individual characteristics is conducive to enhanced learning outcomes. Moreover, it is more efficient for educators to interact with students when they are aware of the specific characteristics that can be relied upon during the learning process. The collaboration between students and the teacher is a fundamental aspect of effective learning [12].

Many foreign language teachers have already developed methods of formative assessment and can systematically monitor students' work using the world's most popular free distance learning systems. These are the three most widely used in education: the open learning management system Moodle, the web-based file-sharing service Google Classroom and the teamwork centre Microsoft Teams, which includes a chat room for discussions, a file-sharing service and corporate applications [6]. However, there are many other practical tools that are particularly well suited to formative assessments and have numerous features that help teachers adapt existing methods to the online learning format. These include online tests, which are the most commonly used by foreign language teachers in the classroom and help to carry out

formative assessment and apply digital tools for effective assessment.

Information technology, which has become an important part of the educational process, has made some adjustments to the methodology of creating and using tests in foreign language courses. At the present stage, working with tests is taking on a new meaning. Tests are no longer just a means of assessing knowledge, skills and abilities, but are becoming an important part of the learning process. The test can be integrated into the structure of the teacher's activity not only at the stage of monitoring and evaluating results, but also as a separate tool for learning and self-study. In the context of online learning, the importance of practice tests increases significantly. The purpose of practice tests is to ensure that the learner has mastered the learning material, and to develop and consolidate the relevant language skills in order to activate them further in the process of communicating in a foreign language.

The most common techniques used in these tests are: multiple choice, sentence completion, transformation, answering questions, replacing constructions with synonyms, etc. Practice tests always provide feedback: keys and relevant grammatical comments. The main point of testing in the process of foreign language learning is to use feedback and control, and the closer the relationship between the test and the learning process, the more effective the learning process and the better the test itself. Online practice tests allow teachers to fully engage all students in the learning process.

Taking into account the limited duration of foreign language courses in non-linguistic universities and the different levels of language training of students, it is evident that are an effective tool. These tests are designed in accordance with the curriculum and serve as a means of assessing students' progress throughout the course and for final control. At the current stage of teaching, test control has reached a higher quality level. The use of computer technology has made tests more diverse and interesting, as well as covering all types of language activities. The independence and objectivity of the assessment of results, uniform control conditions, favourable and comfortable environment during the test make this form of testing popular and attractive for students.

In terms of testing and assessing knowledge, a test offers a number of advantages

over other forms of control. The advantages of online testing are numerous. Firstly, more people can be tested simultaneously, which is particularly beneficial in large classes. Secondly, the results can be assessed rapidly and objectively, which is crucial for maintaining the integrity of the assessment. Thirdly, the time required for testing is reduced, allowing for more efficient use of resources. Fourthly, the time required for analysing the results is increased, which provides more detailed insights into the students' knowledge levels. Finally, the analysis of test results enables the educator to quickly implement changes to the learning process if necessary, thus preventing the repetition of mistakes.

OnlineTestPad.com is a free, multifunctional service for the creation of tests. It offers a range of tools, including test designers, crossword puzzles, logic games, and dialogue simulators, which can be used for various purposes. The service provides a convenient system for testing. The free resource Master-test.net allows teachers to create online tests and download them to be taken without an Internet connection. The main objective of this resource is to conduct interactive testing of students' knowledge. The Wizer service enables the rapid creation of a wide range of question formats, including open-ended, multiple choice, matching pairs, fill-in-the-blank, and fill-in-the-table. Tests and quizzes developed with Quizizz can be completed by students on mobile devices, which is particularly advantageous in a blended learning environment [7]. Based on my own experience of creating and using tests in educational work, I would like to draw attention to the Classtime platform. The free version of the platform provides sufficient functionality for regular use. The tool helps to evaluate the progress of the class and each student individually. The platform's key advantage is the ability to import classes from Google Classroom to Classtime. Another useful tool for monitoring reading and writing skills is the CommonLit platform. With the assistance of this platform, educators can create a free account to gain access to a standardized digital library of short texts, including news, poems, historical documents, and others. The platform's built-in tools facilitate the monitoring of student progress. A convenient service for evaluating essays and letters is the Padlet online board. This allows each student to publish their work on the board, and the teacher to comment and evaluate

each one. This process can be completed without spending a lot of time on it. Oral answers can be assessed by the teacher using collaboration platforms that support real-time video communication. The most common platform in Ukraine is Zoom. Oral answers are assessed according to the accepted criteria of the rating assessment system in the discipline.

It can be reasonably stated that the most appropriate assessment tools will depend on the specific objectives of the teacher.

Feedback as the main way of analysing pedagogical results is one of the basic processes of pedagogical interaction in the organisation of foreign language teaching [18]. It has been proven that providing students with feedback during the learning process increases the effectiveness of learning and improves students' results. When used correctly, feedback guides students in the learning process, engages them in classroom work and motivates them to achieve their goals. Detailed feedback that includes additional information (e.g. strategic information and hints) can lead to increased learning opportunities. These learning opportunities may include greater self-regulation of the learning process, deeper understanding and additional strategies for working on the task. In addition, detailed feedback allows students to understand the types of problems they are encountering and allows teachers to address these problems. Effective detailed feedback emphasises correctness, development of improvement, rather than errors, weakness or lack of understanding.

1.7. Motivation in online learning

One of the key challenges in the field of online education is the issue of motivation among students. In relation to teaching a foreign language course, which aims not only at acquiring knowledge but also at such a skill as communication, the problem of motivation seems to be the most important one. The role of foreign language teachers is of significant importance in fostering motivation to learn their subject. Each foreign language lesson, whether conducted online or offline, provides a practical opportunity

to engage with another culture. The fundamental task of the teacher when preparing the material and implementing the course is the question: How to maintain a high level of interaction in a virtual environment with limited direct contact?

In order to successfully influence students, manage their attention and motivation while learning a foreign language online, it is necessary to use effective tools that take into account the specifics and direction of the course. Otherwise, online learning can have negative results, even if the visual design of the information material, its accompaniment, notifications and the logic of the course and learning tasks are of a high technical level. The course design and the selection of tasks for independent study are of great consequence of regard to the effectiveness of students' learning outcomes. Consequently, the effective organisation and management of online learning by the teacher is directly related to the independent learning activities of students, namely their autonomy. In this regard, the teacher is confronted with the challenge of preparing and implementing an online learning programme that employs the most effective methods and techniques for fostering students' autonomy in learning English, particularly in terms of motivation and meaning.

One of the priorities of higher education is the training of highly qualified professionals. The process of modernising foreign language teaching in an online format requires considerable efforts. The main task of a teacher is to inform students about the importance and specifics of their future profession and to motivate them to learn a foreign language. The development of motivational methods should be based on a comprehensive approach, including a thorough analysis of students' needs, knowledge, skills and difficulties.

Modern psychologists and educators agree that the quality of performance, including foreign language learning, and its results depend primarily on the motivation and needs of the individual, his or her motivation. Motivation is the driving force behind purposeful activity, which in turn determines the selection of methods and techniques, and their sequencing to achieve objectives.

Aware of the leading role of motivation in foreign language teaching to students of a non-linguistic higher education institution, a teacher must have a clear

understanding of the ways and methods of its formation in the context of online learning at a given university. The formation of motivation is, first of all, the creation of conditions for the manifestation of internal motivations for learning, their awareness by the students themselves and further self-development of the motivational and value sphere. Speaking of mastering the culture of a foreign language, it should be noted that it is important what motivates a student to carry out activities. When organising foreign language teaching in a higher education institution, it is necessary to take into account the motives of students' learning activities. It is well known that the transfer of knowledge from a teacher to a student cannot be effective without the student's own activity. Motivation to learn is a necessary component in the process of successful foreign language acquisition. Motivation is the result of a person's internal aspirations, interests and awareness of the need to learn a subject.

An essential element of emotional communication is student motivation. Some students, due to psychological characteristics, require consistent oversight from the instructor to maintain engagement. In the absence of this guidance, the learning process may become insufficiently intensive, lacking self-direction, and consequently less effective. Students who demonstrate strong internal motivation and are capable of self-regulation are more likely to succeed in online learning environments.

The relationship between the instructor and the student is also important for increasing academic motivation to participate in online education because it provides a sense of belonging to the course. Thus, the lack of live communication and limited emotional connection can both complicate the educational process and reduce the level of intrinsic motivation of students, and, on the contrary, contribute to increase the communicative activity of students and reduce the level of their emotional tension. Communication difficulties caused by the lack of direct contact have a negative impact on the psychological state of students and teachers, reducing the level of their mutual trust.

In order to learn English, students require positive motivation, which can be defined as the desire to study, the necessity of doing so, and interest. One of the many ways and means developed by practice for the formation of stable cognitive interests

and motives is the use of information technologies in the learning process.

The formation of motivation in students' learning activity when studying a foreign language is influenced by a number of factors, including high academic performance, a creative approach to the completion of tasks, a readiness for self-education and self-development, the acquisition of additional knowledge, and a sustainable desire to master new knowledge.

To maintain motivation in the classroom [8]:

- Experiment, take risks, vary the tasks you do in the classroom. See what students respond to best. For example, try short stories, films, classroom dramas, songs, projects, grammar exercises, and dictations.

- Choose tasks that give students more 'psychological space' to plan their own work, set their own pace and make their own decisions. For example, writing and modelling activities.

- Choose open-ended tasks. Offer tasks that different people can answer in different ways, where there is no single correct answer. This means that everyone's work can be evaluated.

- Provide choices. If students are involved in deciding what to do, they tend to be more engaged. Instead of saying "Do this" say: "You can choose to do exercise number 3, 5 or 9. Or if you want to do something else, ask me".

- Involve students in decision-making. Many of the decisions that teachers make can often be made together with the students. You may be able to agree when homework is due, how much time they will spend on a particular task, what they will do in the next lesson, etc.

- Find out what students think. Find out if they have any suggestions, if they think they need more practice, which tasks they find easy, interesting or boring. You can set up a 'suggestion sheet' in your group for students to fill in with their ideas.

- Think about your feedback. Instead of just giving low marks, explain to students what they could do to improve their grades next time.

- Communicate with a sense of optimism. Reassure the student that anyone can learn. Encourage them, give them confidence, let them try, take risks and not be

afraid to make mistakes. Give them help when they ask for it, and make them believe that they can do it if they try.

Motivation is always the consequence of the interaction between the individual and the situation, which serves to influence the degree of motivational impulses and subsequent activity. It is important to create a positive learning environment where students feel supported, can freely express their thoughts and ideas, and can see the practical application of their acquired knowledge in their future professional activities. Effective learning motivation includes stimulating cognitive interest, providing opportunities for self-expression and creativity, and ensuring objective assessment of results.

Thus, motivation is a crucial factor in the acquisition of foreign languages. In the context of the globalisation of social life, the issue of motivation in learning foreign languages has assumed heightened significance. The role of interpersonal connections and, consequently, of communication, including interethnic communication, which necessitates the utilisation of a foreign language, is on the rise.

The motivating factors for students' ESP learning in non-linguistic higher education institutions are the way of organizing the educational process, the use of various new technologies, the model of teacher-student interaction, and forms and means of final control.

1.8. Information competence and rules of online communication.

The new paradigm of education encompasses a multilevel system of education, sustainability, flexibility, mobility, online learning. The online learning environment has highlighted the necessity for the educational system to become more digitally oriented. The fundamental principles of the educational process in online learning are purposeful, controlled, intensive and independent student work.

The process of learning in higher education requires from the student the ability to write independent written works (essays, term papers, theses), certain skills in

searching for literature and its selection, preparation for practical classes. In the twenty-first century, it is impossible to carry out a serious search for information without using the Internet. Today, the main driving force of social development is a person with knowledge, skills and ability to use all the advantages of information and communication technologies. In this context, information culture plays an important role among the main requirements for a specialist of the XXI century. Information culture is a complex and multifaceted concept. Specialists consider such components of this concept as communication culture, the culture of reading, writing and documenting, the culture of scientific and intellectual activity, and mastery of information technologies. Information culture helps to protect individuals from destructive information and to live in the emerging information society.

In technical universities, English language teachers purposefully assign students tasks that require them to work with media materials in class. Such assignments have been shown to stimulate students' interest and enhance their motivation to develop cultural and information competence. Discussions in online conferences (Zoom, Google Meet, etc.) are utilised, and tests are provided on the Moodle platform, which hosts the university's main courses. This approach offers benefits for both teachers and students. Students are able to successfully complete tasks, collaborate with their peers during online discussions of the content of the materials they have studied, and learn to evaluate information correctly. The integration of special topics into courses has the effect of enhancing cognitive interest and revitalising the learning process.

Markiv et al. have demonstrated the need to develop students' skills in media culture and the proper information consumption in the process of research, especially in the distance-learning mode. The pedagogical environment is decisive for their formation of such skills. Even e-learning allows you to do it with the right methods and tools. Finally, it is important to model the need for such competence and to show its implementation to solve problematic professional problems. The teacher's task is to encourage students to use the acquired knowledge, skills and abilities in consuming information not only if it is needed, but also in everyday life. It is necessary to convince students of the importance of a critical attitude towards information, checking its

reliability, and using fact-checking methods [19].

Students, as the most progressive segment of society, easily accept everything new and use new opportunities and ways to search for information and communicate with people. Among the characteristics of this age are courage, determination, desire for independence, and the capacity for enthusiasm. The specifics of this age can also contribute to the spread of Internet communication.

The effectiveness of mastering educational programmes that involve an increase in the share of students' independent work depends directly on the level of their information culture. Students should be able to navigate the constantly growing flow of information and follow the rules of personal information security.

The successful formation of information competence requires a number of pedagogical conditions, but first of all - the student's awareness of his/her information needs, and understanding of the role and importance of information in the development of modern society. It should also be noted that the development of students' information competence is not an end in itself, but a tool for the harmonious development of personality. Mastery of information technologies will help students to expand the range of their knowledge and will allow them to adapt more quickly and effectively to the changing professional requirements in the conditions of the informatisation of all spheres of human society.

Thus, it can be said that information culture is an integral part of the general culture of the individual. It includes the ability to navigate in the world of information, the ability to search for information and to use and consume it. Possession of the information culture of a person is an urgent need, especially in the era of the formation of the modern knowledge and information society. A significant role in mastering the information culture of students belongs to universities, which should direct maximum efforts towards the development of the information abilities of their students during their studies in higher education. Accordingly, information competence is one of the basic competencies that the modern system of online education aims to develop, one of the goals of education.

The concept of information competence is closely related to that of information

security. Security is very multifaceted. In the case of the Internet, for example, we can talk about socio-cultural, legal, psychological and health security. The average time a student spends online on a weekday is around four hours, and even more at weekends. At the same time, a significant number of young people spend more than five hours online. On average, they spend one-sixth of the day online. Information security should be understood as a state of protection of the vital interests of an individual, which is manifested in the ability to detect and identify threats of information influence and the ability to compensate the negative effects of information influence. In the educational process, effective information security leads to both an increase in the efficiency of the learning process itself and the preservation of the physical and mental health of students. Information security cannot be guaranteed as a one-time event; rather, it must be considered a long-term objective to be achieved by all members of the educational community.

In the context of contemporary foreign language teaching, which increasingly relies on information and communication technologies, one of the key responsibilities of the teacher is to guarantee the security of the entire educational process. The content of the teacher's knowledge in the field of information security should reflect the specific characteristics of the information threats and risks that are pertinent at each stage of the learning process. The teacher should explain to the students the list of allowed and available websites for assignments, explain the rules of correct borrowing of intellectual property of other Internet users. In the context of online learning, it is important to highlight the functions of Internet resources that allow users to limit access. Furthermore, students should be encouraged to share their experiences and provide feedback on their interactions within the learning process. The issues of ensuring the information security of students should be highlighted and taken into account at each stage of the learning process using the means of information and communication technologies. Therefore, the development of competence in the field of information security should be one of the main components of modern teacher training.

Online learning is direct, real-time communication between teachers and students

during the learning process. In an online learning environment, students are expected to be active participants in video lectures, workshops, and other activities where they answer questions, take exams, and participate in other forms of assessment.

The success of online learning largely depends on the ability of the teacher to communicate with students online, and students to communicate with the teacher and with each other, in accordance with the norms of language, business, and pedagogical etiquette. Rosalyn Sword states, "Communication is key in the classroom: successful teaching is generally considered to require only 50% knowledge to 50% communication skills"[24].

The model of online communication in the university context is defined by the following characteristics:

• communication takes place through information channels created by various Internet services, educational web platforms, distance learning systems and other information and communication tools;

• information exchange between participants can take place through synchronous or asynchronous communication;

• the number of communication exchanges between teachers and students is usually much higher than in the situation of "live communication", due to the exchange of short messages;

• the option of establishing a group within a messaging platform, such as Telegram, for the purpose of discussing and resolving a task or fulfilling an assignment;

• the way in which information is presented and the way in which it is perceived by students is different from that presented in the classroom: textual material is accompanied by various forms of multimedia (illustrations, photos, video fragments);

• a new type of communication is emerging - visual communication, which allows thoughts, emotions and feelings to be expressed through visual images.

One of the most crucial elements of an effective academic institution is the mutual trust between all participants in the educational process. This means that students need

to trust teachers, believing in their competence and objectivity, and teachers need to trust students, believing in their potential to learn and work independently. Trust helps to create an open and supportive atmosphere in which students are not afraid to make mistakes, freely express their opinions and actively participate in the learning process. Mutual respect and trust between teachers and students are the key to successful learning. Romero defines trust as an individual's willingness to be vulnerable, based on the assumption that the trusted individual is benevolent, capable, and acts with integrity [23].

The specifics of network communication require that members of the learning community know and follow the rules of netiquette. The category of politeness represents a fundamental aspect of communication, encompassing a friendly and respectful attitude towards another individual.

The following fundamental principles should be adhered to in the context of online communication between teachers and students, as well as between students themselves:

• It is imperative that communication be conducted in a polite and respectful manner.

• It is advisable to adhere to the same speech norms (correctness, appropriateness of speech, logicality, etc.) as in real communication.

• It is imperative to respect the time constraints and capabilities of one's interlocutors. It is imperative to introduce oneself and identify oneself at all times.

• It is inadvisable to become embroiled in disagreements and it is preferable to avoid them altogether.

• It is imperative that confidential information is not disclosed in personal correspondence.

It is reasonable to conclude that the standards of networking etiquette are similar to those of traditional etiquette, as they are based on the same principles of respect, courtesy and responsibility in communication. Therefore, following online etiquette helps to create positive and productive online interactions.

Conclusion

Thus, online learning in modern higher education institutions is aimed at developing students' active cognitive potential, independence, unleashing their individual abilities and self-development, as well as training specialists who are guaranteed to be in demand in the labour market of the digital economy. In the process of implementing online courses, teachers and students gain unlimited opportunities to develop and share the educational space. In the context of foreign language learning, it is imperative to recognise the significance of maintaining motivation, establishing clear objectives, and undertaking periodic evaluations of progress.

It is the view of those engaged in the field of education and methodology that the future of the educational process will be shaped by the increasing use of online resources. While the integration of this technology into the classroom setting does require a certain level of technical capability and the support of the educational institution, it really increases the effectiveness of the educational environment. Incorporating multimedia technologies in a foreign language lesson facilitates the maintenance of high levels of motivation, the optimal presentation of learning materials, their practice and consolidation, and their subsequent application in educational or professional contexts.

As Markiv et al. (2021) state, "Online learning will allow education to go beyond university walls, and knowledge will become available to more people. Short online courses will be able to be useful for students with complex specialities at the stage of selection, and mobile solutions will make it easier to integrate into the educational environment due to the ability to be engaged in learning at any time. An artificial intelligence will be able to create individual training programs at a more advanced level, adjusting to the personal characteristics of the student, so that he ultimately achieves the best result" [20].

The objective of contemporary educational systems is to furnish students with the requisite knowledge and skills to navigate the complexities of life. An education of this nature equips the individual with the capacity to not only withstand the vicissitudes of

practical life but also to contribute constructively to the advancement of society.

As one of the most important humanitarian disciplines in a technical university, foreign language is designed to humanise the learning process and develop the student's personality. The study of foreign languages has a beneficial impact on all aspects of professionalism, including professional activity, professional communication, and professional personality. The study of foreign languages has the potential to enhance an individual's opportunities and social significance.

The acquisition of a foreign language constitutes a principal instrument of the realisation of integration processes and the mobility of students, scientists and specialists. In consideration of the reforms to higher education in accordance with the Bologna Declaration, the learning of a foreign language assumes particular significance for students of technical specialities. Contemporary pedagogical approaches to the teaching of foreign languages make use of information technology as a tool in the learning process. Such digital resources are particularly useful in the context of online learning. Learning a foreign language necessitates considerable effort and dedication. It is evident that such an endeavour requires a high level of motivation. The level of motivation in learning a foreign language is a significant factor in determining whether students will successfully master the language.

In order to develop an effective strategy for online foreign language learning, it is essential to consider all its components, including methodological, technical, organizational, and psychological aspects. This requires a focus on understanding learner needs, incorporating authentic materials, implementing communicative activities, and providing timely feedback. Furthermore, the creation of a positive learning environment, the setting of realistic goals, and the integration of language learning applications are crucial components of this approach. The strategy should also promote digital competence for both students and teachers and adapt to different learning environments and needs. By incorporating these principles, online foreign language learning can become more engaging, effective, and accessible.

KAPITEL 2 / *CHAPTER 2* [2]
COMMUNICATIVE DIDACTICS AS A STRATEGIC MODEL OF THE EDUCATIONAL PROCESS OF HIGHER EDUCATION IN THE ERA OF ARTIFICIAL INTELLIGENCE

Introduction

Modern society is a society of communication and interaction. Communication is the main tool for progress. And the ability to communicate is an important skill that allows you to effectively exchange information, thoughts and emotions with other people, to help update information, make it modern, and integrate it into various spheres of life. Communicating is the art of mastering a whole arsenal of means of transmitting information, experience, and emotions; it is a competence that needs to be developed, first and foremost, through education. That is why the use of didactic methods of a communicative nature never ceases to interest scientists.

The role of communicative didactics is growing in modern education, where the learning process is increasingly based on interaction between participants through various communication channels. At the centre of this approach is the idea that knowledge is not just the transmission of facts, but the result of active interaction and exchange of experience between all participants in the educational process.

In the context of the digital revolution, communicative didactics opens up new horizons for learning, making it more interactive, accessible and personalised. Everywhere we hear about project-based, situational, integrated learning, trainings and workshops, case studies, and other modern models that promote deeper learning and the development of practical skills. Indeed, this is true. But these types also require new roles from the teacher. He or she becomes a mentor, a mentor, a facilitator, a motivator, etc., i.e. acts as a curator, organiser, director, leader, even an arbiter of communication situations, since all new methods of acquiring knowledge are based on

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interaction, and it is up to the teacher to focus on the effectiveness and efficiency of this interaction. Moreover, in the context of using artificial intelligence - generating knowledge through various chats - the teacher even becomes a coach on the correct formulation of communicative assignments for AI, focusing on the relevant characteristics of the analysis aspects in the assignments. The teacher's communicative tasks focus on conveying to students the importance of being able to correctly formulate statements, analyse contexts, check terminology and its appropriateness when working with chats.

We will consider communicative didactics in the context of the above topic as a strategy for the development of the pedagogical process of the era of artificial intelligence, that is, as a conceptual approach to teaching and upbringing that focuses on the role of communication and interaction in the educational process, using the capabilities of modern technologies, including artificial intelligence. In this vein, communicative didactics is becoming an important tool for adapting education to the new realities emerging in the context of the information revolution, distance learning, and the rapid development of AI. It allows for the effective integration of technology into the educational process, providing more flexible and inclusive learning, which is ultimately not just a trend but meets the requirements of the times.

Thus, didactics is the essence of the educational process, the optimal combination of general didactic methods, techniques and tools used to organise the learning process. I. Strazhnikova rightly notes that teaching technology is a systemic category focused on the didactic application of scientific knowledge, scientific approaches to the analysis and organisation of the educational process, taking into account the empirical innovations of the scientific and pedagogical worker and the achievement of high results in the professional competence and personal development of students [31].

The challenges facing educators in the context of distance or blended learning during martial law in Ukraine force them to look for new pedagogical technologies, and communication interaction has become crucial: To be in touch, to orientate in the resource provision of the subject, to select the main thing and comprehensively reveal the essence of even complex processes and phenomena in accessible ways and

methods, because not all participants in the educational process have the same equal opportunity to gain knowledge (frequent power outages, air raids, occupations, refugee migration make it impossible to have a synchronous process, force individualisation, differentiation of tasks, etc.) In view of this, in our opinion, the so-called 'interaction didactics', which studies learning processes, focusing on the interaction between students and teachers, as well as between students themselves during the learning process, is gaining a new interpretation, because modern learning should not be a passive process, it should include situations where students work together to achieve a common goal, exchange ideas, and argue their positions. This concept emphasises the importance of active participation of all learners in the process of acquiring knowledge, developing skills and building competences.

In recent years, researchers of the theory and practice of teaching have been actively addressing the problem of forming a teacher's communicative competence, which is the basis of communicative didactics (pedagogy of communication, contact, understanding, communicative cooperation): O. Voshchevska, O. Matvienko, I. Maksymchuk give communicative competence an important place in pedagogical skills [19]; O. Ivanikova and T. Haranchuk emphasise that 'the process of training a future teacher involves not only a high level of language proficiency, but also the use of communication as a professionally significant phenomenon, which determines the effectiveness of professional self-realisation' and consider its historical and theoretical origins [11]; A. Volosenko, M. Doktorovych define competence as the ability to realise personal and professional capabilities for the purpose of effective professional activity. Competence is based on the knowledge of the theoretical foundations of professional activity, which allow to implement theoretical knowledge in practice [8]. O. Fentsyk in her textbook 'Pedagogical Communication' focuses on the most significant aspects of professional communicative and linguistic training of a teacher and notes that 'professional and pedagogical communication is a means of carrying out professional activities of a teacher, whose skills should be based on the one hand on special professional knowledge and versatile professional skills, and on the other hand on the ability to exchange information with all participants of the educational process,

achieving mutual understanding' [26]. Scholars such as O. Greilich and N. Flegontova speak of communicative culture as an important component of pedagogical culture in general [6]. N. Basyuk gives an important place to self-programming for communication, in her opinion, 'it is the attitude to communication that will help the teacher to create an atmosphere of trust, psychological comfort, open and equal cooperation in the classroom' [1]. A. Polishchuk and V. Duganets emphasise the importance of proper organisation of training so that students 'perform actions motivated to solve communicative tasks aimed at achieving the goals and intentions of communication', i.e., in their opinion, the formation of communicative competence is possible if real communicative situations are modelled in the educational process. It is known that students' educational activities should be organised in the following way [27].

The use of artificial intelligence as a communication tool is considered by O. Lysenko [17], A. Solodkov [30], L. Polyakova [30], but the issue of communicative didactics as a strategic direction in education has not yet been considered in detail.

The purpose of the study. We believe, and therefore will try to prove, that the communicative model of education is a powerful strategic direction for the development of the pedagogical process. In our opinion, it provides new opportunities for personalisation, adaptation and interactivity of learning.

Revealing the tasks, principles and forecasts for development is a task that requires a prompt response from the professional community, since the use of artificial intelligence in education cannot be stopped, it needs to be guided to conscious, intelligent, analytical and competent use by all participants in education.

It is important to summarise the already known didactic techniques for developing English communicative competence and try to suggest new ones that arise from technological progress, including the power of artificial intelligence.

2.1. Basic principles of communicative didactics as a strategic model of modern education

The notion of communicative didactics is developing within pedagogy and psychology and includes approaches that focus on communication processes in learning and teaching. This is an interdisciplinary approach that combines the theoretical foundations of both communication and pedagogical technologies, focusing learning on the interaction between participants in the educational process.

To give a broader understanding of communicative didactics as a model of the educational process, it is worth analysing several possible approaches to its definition. In fact, these approaches can outline the main purpose of communicative didactics in modern pedagogy.

1. Communication approach. This approach considers communication as the main tool of the learning process. In this context, communicative didactics focuses on how teachers and students interact through various forms of communication (verbal and non-verbal), using language, facial expressions, gestures, and technology (including information and multimedia). Communication here is not only the transmission of information, but also a process of mutual understanding and knowledge construction.

2. Interactive approach. This approach emphasises the importance of active participation of both parties - the teacher and the students - in the learning process. Communicative didactics in this context assumes that knowledge is acquired through interaction, in which students actively discuss ideas, ask questions, and respond to the opinions of others. This emphasises the importance of dialogue, interaction and mutual understanding in learning.

3. Psychological and pedagogical approach. According to this approach, communicative didactics focuses on the relationship between the development of the student's personality and communication processes. Teachers should take into account the psychological characteristics of students and their communication needs, which makes it possible to create a comfortable learning environment in which the student

feels supported, protected and motivated to learn.

4. Sociocultural approach. Within this approach, communicative didactics takes into account the socio-cultural aspects of learning, in particular the role of cultural traditions, language and social norms that determine the style of communication in educational institutions. This approach emphasises the importance of mutual understanding between people of different cultures, as well as the need to teach students to communicate effectively in a multicultural environment.

5. Technological approach. The technological approach to communicative didactics emphasises the use of modern technologies (IT, multimedia, online platforms) to develop communication skills. It includes the use of digital tools to support the learning process, which makes it possible to create a more interactive and effective environment for communication, in particular through forums, video conferencing, chats, etc.

6. Constructivist approach. According to this approach, the learning process is seen as an active construction of knowledge in the process of communication between participants in the educational process. Communicative didactics in this case focuses on how students, through joint discussion, problem solving and project creation, create new knowledge themselves, using communication as the main tool.

Thus, communicative didactics in the context of teacher-student interaction in the context of artificial intelligence is a new learning paradigm that takes into account changes in the educational process due to the introduction of AI technologies and digital tools. It focuses on the development of communication processes between the participants of the learning environment - teachers and students - with an emphasis on interactivity, personalisation of learning, and efficiency of information exchange.

Communicative didactics as a strategy requires taking into account current trends and requirements that currently define the learning process, which has changed significantly during the Covid-19 pandemic and under martial law in Ukraine. However, despite the difficult conditions, Ukrainian education continues to develop, introducing new approaches and technologies to ensure access to knowledge.

In our opinion, in these conditions, **communicative didactics should be**

implemented in the context of increased attention to the psycho-emotional state of participants in the educational process, as well as professing the idea of preserving the unity of the nation through education. These cross-cutting priorities, through the mediation of communication tactics and practices, should become the basis for a favourable, friendly, trusting and comfortable learning environment.

Other important features of communicative didactics are:

1. *Interactivity in distance learning and hybrid formats.* Creating conditions for active interaction between students, teachers and technologies. Webinars, online lectures, conferences, guest masterclasses, etc. have become important forms of teaching. Let's try to analyse the communication techniques for organising the process of acquiring knowledge during interaction through technical means.

Using questions to activate attention - the teacher can ask students questions to stimulate their thinking and expression. This activates attention and students are more likely to engage in the interactive process. It should be noted that the most important questions are not those that allow you to check the level of mastery of the previous topic, but those that the teacher can ask during the lecture presentation of the material to understand whether the level is accessible to students and how to further adjust the communication.

Tone and dynamics of speech. Changes in pace and intonation help to maintain students' interest and emphasise key points, while grooves and emphasis on certain information blocks allow students time to think and ask questions. It should be noted that visual contact, demonstration of visuals when explaining more complex information, and the use of multimedia (videos, animations, interactive slides, transitions, video presentations) are important. This alternation of communication from different participants makes the lesson dynamic, interesting and helps to retain the material.

Use small groups for discussion - or create a focus group of interested students within the seminar, but do not forget to address other classmates, involving them in the collective discussion. The teacher can divide students into groups to work on certain issues or projects, which stimulates their activity and develops their communication

skills. The teacher's communicative role is to moderate the discussion. He or she also uses motivation and encouragement, because it is very important to keep students motivated by noting their even minor achievements, for example, praising them for a correct answer, active participation or constructive questions.

Interactive practice - real-time surveys and tests that help to quickly assess the current level of learning and help to increase student participation. Another option is a chat room to collect students' opinions or to quickly find out the answer to specific questions. It should be noted that chats also provide an opportunity for students to ask anonymous questions, overcoming some psychological barriers.

This regular feedback keeps the communication act going and encourages students to come back for the next meeting. During the comments, the lecturer finds out what was unclear or if they have additional questions, thus assessing the effectiveness of their explanation of the lecture material. In this way, the teacher can determine whether there is a need for additional consultations or adaptation of the content to the needs of the students.

So, as you can see, effective communication during online lectures and conferences involves the use of various techniques to keep students engaged, ensure that the material is clear and motivates them to participate in the learning process. All of these techniques help to create a dynamic and engaging atmosphere, which is especially important in online education. Of course, AI can be a powerful tool for providing a personalised approach to each student, adapting learning materials to meet their individual needs.

2. *Collaboration and cooperation of participants in the educational process outside the classroom* (in particular, using AI capabilities). The pedagogical process is not one-sided, but involves interaction between students, as well as with teachers and educational technologies, and collaborations in the organisation of practical and seminar classes help unite students around a joint research of a problem, with the selection of individualised tasks, taking into account the availability of software. Through the use of special collaboration platforms and applications, students can interact with various participants in the learning process (classmates, teachers, digital

assistants) in real time. Platforms for group projects or discussions can be supported by algorithms that evaluate everyone's contribution and help improve collaboration. Artificial intelligence can be particularly helpful in implementing this model, as it can support the process of collective learning by creating collaborative platforms where students can share ideas and experiences. Of course, the role of the communication leader can remain with the teacher or be taken over by a senior member of the research group, who is chosen by the group. He or she coordinates the time, content, and efforts of classmates, as well as presents the results. Thus, thanks to interactive AI-based systems, students can work together to solve complex problems, mutually evaluate and correct each other's results, which helps to develop communication, collaboration skills, critical thinking, and an understanding of collective responsibility for the result. It is worth noting that the use of chatbots and AI-based virtual assistants allows students to receive instant help with their learning tasks, as well as answers to questions and support in the process of self-study. Chats enable communication between students and teachers outside of the classroom, which helps to increase the level of interaction.

To be fair, we should note certain negative aspects of AI: technical - it requires an appropriate infrastructure; dependence on technology - communication through gadgets carries the risk of losing live contact; ethical - compliance with ethical standards, confidentiality and ensuring students' rights, on the one hand, and media-literate consumption of information, checking the reliability of the generated knowledge, on the other.

3. Adaptability of learning technologies and systems. Taking into account the individual characteristics of students, their learning pace and style of perception of information. Use of AI to create adaptive learning systems that regulate the complexity of tasks or provide additional support to students.

To summarise the above conditions for the effective implementation of communicative didactics in the modern realities of Ukraine, we note that: there is still a digital divide - not all students have equal access to digital technologies and the Internet, which can create barriers to education; there are also growing problems with students' motivation and self-organisation - in virtual learning, they may feel more

isolated and less motivated to learn, so it is important to organise communication in such a way as to maintain and activate their interest; we have a new definition of the teaching role - in the context of digital technologies, they become not only a source of knowledge, but also a facilitator of the learning process, which requires new skills - the ability to work with digital tools, organise online communication, support students in autonomous learning.

Next, we will reveal **the principles of active interaction between participants in the educational process of higher education**.

The principles of communicative didactics are based on the principles that enable the learning process as an active interaction between the teacher and students, with an emphasis on the development of communication skills, as well as on interaction through various forms and means of information exchange. These principles take into account the socio-cultural, psychological and pedagogical aspects of the learning process, including the impact of new technologies and interactive methods. Hence the basic principles of communicative didactics. Let's analyse the most important ones in more detail.

The principle of two-way communication. In the educational process, the emphasis is on two-way communication between the teacher and students. This means that the teacher not only imparts knowledge, but also actively interacts with students, receives feedback in a timely manner, takes into account their needs and questions, responds to them, adjusts the approach, thus adapting the learning process to the interests, capabilities and level of knowledge of students.

The principle of active participation. Education should be organised in such a way that students are actively involved in the learning process. It is important to stimulate their activity in learning through discussions, collective and individual tasks, solving problem situations, as such activities contribute to the development of critical thinking and self-education skills. These competences are crucial in the context of distance learning, when most of the information is obtained independently thanks to the correct reference to sources by the teacher.

The principle of communicative interactivity. The use of interactive teaching

methods is one of the main principles of communicative didactics. Not only lectures are important, but also discussions, role-playing games, focus groups, simulated situations, and debates that allow students to learn the material through active interaction with fellow students and the teacher. AI chats can be a platform for algorithmising problems, phasing their consideration, searching for or developing problem situations.

The principle of individualisation and adaptability. Learning should be adapted to the individual needs of students, their level of training, and the way they perceive information. The teacher has the opportunity to use various forms of communication, individual consultations, as well as digital resources to apply personalised didactic techniques.

The principle of mutual respect and trust. Effective communication is impossible without mutual respect and trust between the teacher and students. It is important to create an atmosphere in which students feel comfortable, have the opportunity to express their opinions, ask questions, and the teacher treats each student with respect and takes into account their point of view.

The principle of using multimedia and digital technologies. Integration of the latest technologies into the educational process is now becoming an important component of communicative didactics. The use of online platforms, video conferencing, interactive materials, as well as AI and adaptive learning systems, allows for new opportunities for interaction and increased learning efficiency.

The principle of developing critical thinking and reflection. Clearly, communicative didactics contributes to the development of students' critical thinking, which is manifested in their ability to analyse, evaluate and systematise information. Reflection - the process of realising one's own learning achievements and mistakes - is an important component of this principle. The teacher should encourage students to self-assess and develop themselves through questions, discussions and reflective practices.

The principle of focusing on the cultural and personal context. Since learning takes place within a particular culture, communicative didactics should take into

account the cultural and social characteristics of students. The learning process should take into account the individual, cultural and social factors that influence communication and learning, contributing to the development of intercultural competence.

The principle of critical assessment of learning outcomes. The teacher should focus on a comprehensive assessment of learning outcomes that takes into account not only formal achievements but also the development of students' personal and social skills. It is important to evaluate not only knowledge, but also students' ability to apply this knowledge in practice, their ability to work independently and collaborate with others.

The principle of long-term interaction. In communicative didactics, it is important to build not only ongoing communication between the teacher and students, but also to create conditions for long-term relationships that go beyond a specific course. These can include mentoring, professional consultations, participation in joint research or community projects.

The main and modern methods of communicative didactics include:

Discussions - help students formulate their opinions, express them in public space and respond to the views of others, teach them to think analytically, express themselves and support the communication act;

role-playing games - students take on different social roles and study real-life situations, which allows them to gain experience in solving real problems through simulation (the teacher can be a mentor or coach);

project activity - joint participation in a project with the distribution of roles and responsibilities, which is an important aspect of social communication;

case method - involves the use of real-life practical situations for discussion and solution, which makes it possible to apply theoretical knowledge to real problems;

text discussion - a method that helps students develop skills of critical analysis and argumentation of their opinions based on textual material.

We would like to emphasise the significant prospects of communicative didactics in the AI era, because in the future, it may well become the basis for integrating the

latest technologies into the educational process. We can predict (based on the text generated by AI) that:

- learning will become more personalised and accessible through the integration of AI tools;

- teachers in higher education will contribute more to the development of critical thinking skills, creativity and adaptability in students, using technology as a tool to support learning;

- all participants in the pedagogical process will work with new digital tools that will force the integration of multicommunication approaches into the educational process - from virtual laboratories to simulated reality;

- global educational communities will be created - universities will increasingly integrate into global educational networks, creating opportunities for students from different countries to study and exchange experience;

- innovative teaching methods will become available and crucial

- the use of artificial intelligence, virtual and augmented reality, blockchain technologies will allow creating new forms of interaction in the learning process, increasing its efficiency and accessibility.

As we can see, the principles of communicative didactics determine new approaches to the organisation of the educational process, where communication is the main tool of interaction. They ensure the development of active forms of learning, allow taking into account the individual needs of students, promote the development of critical and reflective thinking, as well as the integration of the latest technologies to improve the efficiency and inclusiveness of education.

2.2. Pedagogical communication: formation of communicative competence of participants in the educational process in the context of rapid development of technologies, including artificial intelligence

Communication is the basis of teaching, as it provides an opportunity to transfer

knowledge and develop the necessary skills in students. The communication audience is important for communication - it is a group of people who are in a communication situation: the audience in an advertising campaign, interlocutors during a public speech, readers of your blog or social media, or even colleagues at work. Identifying your communication audience helps you choose the right tone, style and medium to ensure that your message is clear and effective for that specific group of people. To be effective, the message should be based on true facts, beliefs and arguments, be accessible and understandable, emotional and engaging. It should be a correct, clear and logical message that will help to reach the target audience and get a response from them [28].

Modern Ukrainian scholars define foreign language communicative competence of future specialists as 'a multidimensional phenomenon that includes: a set of socio-cultural, linguistic knowledge, skills and abilities using foreign language tools depending on the social and role situations of professional activity; cognitive and activity components, ensuring the unity of communicative and professional culture of a specialist; cognitive, communicative and integrative functions of communication' [18, 248].

Scientists O. Markiv, O. Zarivna, N. Khymai, N. Shalova define the guidelines for the formation of English-language communicative competence in the educational process and in society in general: 'The value guidelines in the process of formation and the corresponding indicators of the levels of English linguistic competence of technical university graduates, as can be seen from the study, can be: lexical and semantic level of speech, intonation and psychological characteristics of the partner, his mentality, genre specificity of communication and terminology, communicative tolerance and, in general, the communicative situation that sets the formats, style, intonation of the conversation' [12].

There are verbal communication - oral and written messages between students and teachers, which is the basis of the educational process; non-verbal communication - facial expressions, gestures, posture, tone of voice, which also play an important role in perception and mutual understanding; interactive forms of communication - group

discussions, teamwork, project activities, role-playing games that contribute to the development of social and communication skills.

Communication skills are a set of skills and abilities that allow you to effectively interact with other people, transmit and receive information, and establish mutual understanding in different situations (negotiate, resolve conflicts). They include not only speaking and listening skills, but also the ability to interpret others' messages correctly, take into account their emotions and needs (for example, empathy and psychological support as a communication foundation in war), and use different communication channels.

Thus, communicative activity is 'a complex psychological category that includes the subject of this activity, the need, the relevant motives, involves the implementation of communicative actions and operations, the use of methods and means adequate to the communicative situation' [24, 6].

The teacher's ability to clearly and comprehensibly convey the material, actively listen, show empathy and adjust their communication in accordance with the needs of students - all this determines the effectiveness of pedagogical communication. S. Parshuk and N. Kruglova note that 'the success of pedagogical communication depends on whether the teacher is able to establish contact with the audience, on the systematic presentation, logic, argumentation, ability to stimulate students for further activities, encourage, manage attention, anticipate conflicts, disagreements, relieve emotional stress in communication and remove barriers, prevent conflict situations' [25, 320]. So, pedagogical communication between a teacher and students is based on the achievement of informational, value-oriented, motivational and social goals. O. Kovalenko emphasises that 'the closer the communication links between all the actors in the scientific and educational process, the higher the level of its effectiveness. Of course, student-teacher communication is not limited to scientific and educational activities, it is conditioned by the nature of the personality as a teacher, social self-presentation' [14, 474]. Today, this reputation is influenced by the level of communication competence in the context of digitalisation of education.

Undoubtedly, modern technologies are opening up new horizons: they make

educational materials available in any time and space, create new formats of interaction (online courses, video conferencing, educational platforms) and develop digital communication competence of both teachers and students. Digital tools are increasingly being used, especially in distance learning and in the context of accessible AI: *online courses*: webinars, online lectures and courses create new opportunities for students to gain knowledge from the world's leading universities without leaving home; *virtual laboratories and simulations* enable the use of virtual learning environments where students can conduct research, work with data and simulate various processes, giving them access to experiments and experience without the need for physical resources; *academic communities and forums* -for creating platforms for the exchange of ideas, research papers and projects on specialised online platforms, forums and blogs, which allows for increased collaboration, interaction and innovation.

As we can see, the modern process of professional and pedagogical communication is multifaceted, but traditionally involves the following stages (according to N. Khlistunova):

1) modelling by a teacher of future communication with a student or a group (prognostic stage);

2) organisation of direct communication at the moment of initial interaction ('communicative attack');

3) management of communication during the pedagogical process;

4) analysing the situation of previous communication and modelling it for further activities. For communication to be constructive (rather than destructive) at each stage, the teacher must master the psychological and pedagogical culture of communication, namely:

- know the psychology of student age and the characteristics of a particular student audience;

- objectively assess the behavioural reactions, communicative activity of individual students, and respond adequately to them emotionally;

- to be able to quickly organise the audience and draw its attention to the content of the lesson (methods of self-presentation and dynamic influence), to involve all

students in active work;

- choose a way of behaviour that best suits the characteristics and mental state of students;

- master the methods of stimulating intellectual initiative and cognitive activity of students, organising dialogue interaction;

- timely adjust the communicative idea in accordance with the real conditions of pedagogical interaction;

- analyse the process of communication, the correlation between the purpose, means and results of communicative interaction [32].

These skills are the essence of communicative competence. Let's elaborate on its content.

Communicative competence is a system of internal resources necessary for building effective communication in a certain range of situations of interpersonal interaction. It provides such a level of interaction with others, which allows a person within the limits of his abilities and social status to function successfully in society, as well as the presence of life experience, erudition, scientific knowledge, etc. [29]

Communicative competence - implies the ability to change the depth and range of communication, to understand and be understood by the communication partner (O. Voloshyna, N. Sergienko, O. Tsymbaliuk); means the ability to establish and maintain a communicative act (G. Fil); expresses the ability to perceive, evaluate and interpret the situation, plan communicative actions, choose the rules for regulating communicative behaviour and means of its correction (N. Kondratenko) [20, 14].

Communication competence includes the following components:

- the ability to establish and maintain necessary contacts with other people;

- possession of meaningful information and the ability to operate with it;

- the ability to cooperate and achieve mutual understanding.

Thus, communication competence is an important component of professional and personal success. It is an important aspect not only in teaching, but also in any profession, as it ensures correct, clear and effective communication in various fields of activity.

Communicative competence as a system:

1. Communicative knowledge: theoretical knowledge of communication processes, types and models of communication, the basics of verbal and non-verbal interaction; norms and rules of communication, including knowledge of socio-cultural, ethical and professional norms of interaction, as well as rules governing communication in a particular context; mastery of language, namely: understanding of language norms and styles, ability to use a variety of language resources depending on the situation (formal, informal, scientific, public communication).

2. Communicative skills. (We have already partially described them above): listening skills - not only understanding what is said, but also active listening, which includes focusing on the interlocutor, confirming understanding, asking clarifying questions; ability to express one's thoughts - the ability to clearly and understandably formulate one's ideas and arguments, the ability to adjust one's speech to the audience; ability to conduct a dialogue: the ability to organise a dialogue, ensure equality of the parties, maintain a balance between speaking and listening; the ability to work with context or otherwise - the ability to adapt one's communication to the situation, take into account social, cultural and professional aspects; the ability to interact in groups, i.e. the ability to solve problems together, organise group activities, reach compromises.

3. Communication skills: the ability to use language correctly and effectively to convey information - clarity, logic, ability to build an argument, choose the right words to express thoughts; the ability to use body language, facial expressions, intonation, facial expressions to express emotions and support what is said; knowledge and ability to apply etiquette in speech, express requests, gratitude, apologies, conduct discussions in professional and personal contexts; emotional intelligence - the ability to recognise emotions in oneself and others, to manage

4. Motivational component of communicative competence. It means showing interest in communication, the ability to show empathy, compassion and attention to the needs and problems of the interlocutor, as well as being ready to develop your communication skills, willing to adapt your communication approaches for better

understanding and effectiveness.

5. The cognitive component is nothing more than: analytical skills, creativity and flexibility of thinking, which is manifested in the ability to generate new ideas, look for non-standard solutions in the process of communication, as well as critical thinking - the ability to objectively analyse the situation, evaluate arguments, and verify the reliability of information.

6. Interactive skills: conflict management - the ability to identify and effectively resolve conflict situations in the process of communication, the ability to negotiate and find compromises; persuasion - the ability to clearly and reasonably present one's point of view, influence others with the help of logic, emotions and convincing arguments; the ability to change the style and approach to communication depending on the audience and the specific situation (for example, in a formal environment or in informal communication).

7. Communication ethics. Tolerance, honesty, and openness, knowledge of the rules and regulations regarding confidential information, and adherence to ethical standards in communication are crucial in a globalised and open society today. This point is especially important in the AI context, as AI chatbots are a powerful tool for improving communication between students and teachers, contributing to a more efficient, accessible, and personalised learning process. They help to reduce the workload of teachers by providing students with constant support that meets their individual needs and ensures comfortable learning at any time. At the same time, critical thinking and a culture of working with information (checking for accuracy and responsible production and consumption of information).

To sum up: communication competence is an important factor in successful personal and professional development. It includes a variety of aspects, from knowledge and skills to motivational and ethical components that allow you to interact effectively in various social and professional contexts. The ability to communicate effectively is the basis for establishing mutual understanding, solving problems and achieving common goals in any field of activity.

For communication to be effective, the speaker must care about the audience, take

into account its motives and interests. Then the following effects of communication will arise: emotional satisfaction and comfort, satisfaction of cognitive interest, aesthetic enrichment, a sense of the importance of personal participation, prestigious effect - coincidence of values, utilitarian effect - practical significance of the information received, etc. [11, 382].

Now let's pay attention to the educational possibilities of artificial intelligence in the formation of communicative competence.

Here, we will identify another role for a modern teacher - an innovative teacher, an 'integrator of educational technologies'. In an environment where artificial intelligence is becoming a tool for generating new knowledge, teachers should not be afraid of this technology, but rather use it correctly and profitably in the classroom. After all, AI can automate many routine tasks and open up new learning opportunities. For example, it can generate intelligent hints and recommendations for students, search for additional resources to study certain topics, and even get answers to questions in real time. This is what helps teachers to develop algorithms for completing certain tasks. The role of the teacher-'integrator' can be explained as follows: it provides emotional support, inspiration, and motivation for students to develop critical thinking and conscious use of AI; it leaves the organisation of distance learning to the students, so to speak, and partially 'frees' the teacher from the responsibility of adapting personalised programmes created with the help of artificial intelligence to the individual needs and capabilities of students. The progress of AI is unstoppable, so the role of the teacher remains fundamental - he or she becomes a mentor, guide, and partner in AI learning [21].

Thus, the teacher as an integrator of educational technologies plays a key role in the modern educational process, as the ability to effectively combine traditional teaching methods with new technologies is essential for improving the quality of education. A teacher becomes a bridge between traditional educational methods and modern technologies. They integrate tools such as e-learning platforms (Moodle, Google Classroom), interfaces for testing and feedback (Quizlet, Kahoot!), and communication and collaboration tools (Zoom, Microsoft Teams). These tools help to

create flexible learning environments and provide students with the opportunity to learn anywhere and anytime.

Educational technologies allow teachers to significantly improve interaction with students through chats, video conferencing, forums, blogs and social networks. This allows for real-time discussions, group projects, and the sharing of materials in a convenient way. Interaction becomes more dynamic, and students can ask questions and receive answers without time limits.

We should also pay tribute to GPT chat, which students are increasingly using to prepare for seminars. As mentioned above, it is important to pay attention to the ability to formulate communicative tasks for the chat, check information, and build a chain of messages that are necessary for deeper, more detailed coverage of the object of analysis for which the AI generates texts.

Therefore, from the point of view of communicative didactics and interaction pedagogy, the use of artificial intelligence tools is important for communication in synchronous or asynchronous mode, especially in distance learning.

2.3. English-speaking communicative competence as a need of the globalised educational space.

English-language communicative competence brings communication in higher education to a new level, as student mobility, dialogue of cultures, and access to global resources for knowledge require students to be proficient in a foreign language and be able to use it both in their studies and in everyday life. English language communicative competence in higher education is becoming an important aspect of preparing students for the globalised world, where knowledge of English opens up new opportunities for professional development and academic work. This concept encompasses not only the ability to communicate in English, but also the ability to use the language effectively in academic and professional contexts.

Accordingly, the concept of 'English communicative competence' can be seen as

the ability and willingness to communicate in English.

The structure of English communicative competence can look like this:

Linguistic level - (linguistic) competence, which implies a system of knowledge, skills and abilities to carry out English-language communication in typical communication situations. It means knowledge of English grammar, vocabulary, phonetics and spelling. It ensures the student's ability to correctly formulate statements, understand and use various language structures, and expresses the ability to use the language in an academic context, in particular in scientific publications, presentations, and research.

Socio and cultural level is a set of information about the socio-cultural characteristics of a nation; it includes the ability to understand and interpret cultural contexts in the course of study, research and participation in international conferences.

Professional level is a competence that involves knowledge of professional terminology and skills in working with material. The art of asking different questions (factual, convergent, divergent, combined, rhetorical) that set the direction of communication. Academic writing skills, as well as the ability to speak in public, prepare scientific reports and presentations.

Cognitive level. The ability to effectively perceive and comprehend information presented in English, especially in the context of courses, literature and research. This also includes critical thinking skills and the ability to integrate English-language sources into the learning process.

It is difficult to overestimate the role of English language communicative competence in higher education, as it is the main language of scientific communication. Proficiency in English gives students access to international scientific resources, exchange programmes, internships, conferences and research projects, which contributes to their academic and professional development. When studying English at the Faculty of Linguistics, students are, of course, taught all possible ways and methods of modern communicative didactics. However, communicative English competence is developed in a different way at non-language universities. We, like most researchers (L. Hrytsiak, N. Khymai, M. Kuziv), propose to develop discussion, interactive

methods, games, encrypted sentences, problem solving, social forms of learning, group projects and situation modelling, etc. - all the techniques that stimulate communication, speaking, cognitive interest and desire to learn.

H. Bidasiuk, among others, considers the method of 'extreme interview', noting that 'the peculiarities of extreme interview questions are a fairly accurate test of stress resistance, correct assessment of behaviour in a stressful situation, as well as determination of resistance to defiant behaviour. Candidates are treated harshly, rigidly, and often without due respect. They ask unexpected, strange, personal questions, simulate uncomfortable situations, involve third parties (a bold secretary, for example)' [3].

D. Olshanskyi, I. Kyselova, M. Tereshchuk consider in detail the method of forming English-language communicative competence based on reading professional literature, according to which 'reading professional literature has always been considered in teaching methods both as a goal and as an educational tool: through reading, students enrich their vocabulary, including through terms and professional jargon, analyse lexical items and grammatical structures both at the level of spelling and syntax, pay attention to the stylistic means used, learn to adequately interpret the texts. They consider, in particular, the method of 'jigsaw reading', which is an integrated activity based on a combination of reading and oral communication (speaking and listening) and independent extracurricular study of the text by students, so that the teacher can organise oral communication activities based on the read material in the next class [23, 143-144].

I. Moliaka, for example, focuses on the contradiction between the traditional approach to teaching English phonetics and the need for a new integrated approach based on a comparative analysis of the phonetics of English and Ukrainian languages, which has led to the need to revise the content and structure of English phonetic competence [22].

L. Kupchyk, A. Litvinchuk, I. Mykytyn, for example, propose a mechanism for the formation of English communicative competence using the innovative model 'flipped classroom' in a non-language higher education institution. Its essence is that

what used to be considered classroom work is done at home, and what used to be homework is done in the classroom. Researchers define that 'the flipped classroom model integrates four basic elements

- flexible learning environment: teachers can modify the learning process through continuous reflective activity and interaction with students;

- learning culture: active involvement of students in various activities, control of the learning process and provision of feedback.

- learning content: well-prepared and well organised, available on the learning platform;

- professionalism of the teacher: the teacher plays the role of not only a translator of knowledge, but also a tutor, facilitator, colleague and designer [16].

Indeed, in our opinion, this model has a justified priority in the context of distance learning, when communication is mainly carried out through digital technologies and digital media outside of class time. These scholars conclude that 'the "flipped classroom" model makes English language learning more communicative, active and social on the part of the student, and involves increased interactive interaction between students and the teacher, as well as between students. The implementation of communicative-oriented methods contributes to the formation of students' sense of responsibility for the learning process and the ability to learn throughout life [16].

We can observe the activity of forming students' English-language communication through artificial intelligence chats. ChatGPT itself defines the functions of AI in the process of English-language communication as follows (the listed functions are generated by AI):

Support for dialogues: Chatbots such as ChatGPT are able to engage in realistic conversations with users, helping them to practice spoken English. This can be useful for students and professionals alike who want to improve their conversation skills on a variety of topics.

Academic English learning: AI can help students develop academic texts in English by providing support in writing essays, articles, papers, or coursework. The chatbot can explain the rules of academic writing, give advice on text structure, citing

sources, and preparing for publications.

Improving writing skills: Students can use chatbots to write letters, essays, and other written assignments, and AI provides feedback on grammar, style, and vocabulary to help improve their writing skills.

Learning through questions and answers: Students can ask the AI questions on any topic and it will provide answers in English. This helps students not only improve their grammar, but also learn scientific and technical vocabulary in their subject.

Topical discussions and debates: Chatbots can simulate discussions on various academic or social topics, allowing students to practice English in the context of real-life discussions. For example, students can discuss scientific advances, ethical issues, or current global issues.

Indeed, AI-powered English communication via chat rooms is becoming increasingly popular and important for students' language skills development, especially in the context of globalisation and the integration of different language and cultural groups. It provides an opportunity for individual practice, quick feedback and access to a wealth of resources, making it an indispensable tool in the modern learning process.

2.4. Didactic methods of forming English language competence in the process of learning English

Contemporary scholars N. Khymai, O. Zarivna, D. Olshanskyi, I. Kyselova, M. Tereshchuk, I. Moliaka and others give an active role to practically oriented methods of learning a foreign language, because 'communication in a foreign language is not only the exchange of vocal data, signs and signals, but also deep emotional and cultural communication' [22].

Various didactic methods are important for the development of English communicative competence, as they promote active language acquisition, develop communication skills, and increase students' motivation to learn the language. The

following methods are presented in the theoretical and practical discourse:

Role-playing. Description: students take on roles in specific situations and interact with each other using the language to complete a task. This helps students to practice real-life speaking situations. Advantages: develops speech activity, creativity, improves listening and speaking skills, motivates language learning through practical application;

Communication games. Description: the use of games where the main goal is communication. For example, '20 Questions', 'Tell without telling', or 'Spy' (you have to guess the word through questions). Advantages: Games motivate learners to participate actively, improve communication skills, and help overcome language barriers.

Problem-solving tasks. Description: tasks that present students with problems that need to be solved using English. For example, planning a trip, solving business situations or discussing ethical issues. Benefits: They help students develop critical thinking, argumentation skills and express their own opinions in English.

Discussions and debates. Description: Holding discussions on topical issues where learners can express their opinions, listen to others, answer questions, and support or refute arguments. Benefits: Promotes expression, argumentation and listening skills, and improves grammar and vocabulary through practical language use.

Listening and comprehension tasks. Description: Using various audio and video materials to develop listening comprehension skills. These can be podcasts, videos, audio recordings of interviews, news, etc. Benefits: They improve listening skills, allow you to get acquainted with natural speech rates, accents, and intonation.

Use of technologies, including AI. Description: Using mobile applications, online courses, video conferencing to practice English. Platforms such as Duolingo, Memrise, or Skype classes with native speakers can help develop all language skills. Advantages: Provides access to a variety of resources, ease of use, allows you to communicate with native speakers, and improves self-study skills.

Interactive exercises. Description: Exercises where learners interact in pairs or groups, completing tasks that require communication. This can be mutual discussion

of texts, translation of dialogues, exercises using interactive whiteboards or online platforms. Benefits: Increase students' interest, promote better learning through active use of the language.

Language partners and groups. Description: Organising language pairs or groups for language practice between learners. These can be 'exchanges' between learners with different languages or levels of language proficiency. Benefits: Improves communication skills, provides an opportunity to practice the language in an informal setting, and promotes intercultural competence.

Projects. Description: Organising work on a collaborative project where learners have to use English to research, present results or discuss. Advantages: Encourages active use of the language in real-life situations, improves collaboration, critical thinking and public speaking skills.

Reading and text analysis. Description: Reading literary or non-fiction texts followed by discussion, analysis, writing reviews or extracting key ideas. Benefits: It develops reading and comprehension skills, enriches vocabulary, and improves speaking practice through content analysis.

O. Zarivna gives some recommendations on how to acquire communicative competence in English:

1. Speak a foreign language at every opportunity. Initial uncertainty becomes a kind of barrier and this is a recognised fact. To learn to speak, you need to speak, not be afraid to look incompetent, because 'practice is a very good way to master a foreign language, but practice without control and corrections by professionals only multiplies and consolidates mistakes and will be ineffective' [10].

2. Immerse yourself in the culture of the target language. For example, reading, listening to the radio or communicating with native speakers speeds up the process of language acquisition.

3. Use free podcasts and apps for learning foreign languages.

4. Try to use authentic learning materials rather than adapted ones. Working in a higher education institution, we noticed that the recommended method of teaching English is to adapt the level of difficulty of tasks to the level of knowledge of students

- all to make them comfortable and want to learn.

5. Use mobile applications (smartphone apps), which are not designed for language learning but have many features that can be used for learning.

6. Join professional networking communities. Maintain your own blog or social media page in English [10].

Each of these methods has its place in the English language teaching process, depending on the purpose of the lesson and the level of the students. It is important to combine different methods to make learning not only effective but also interesting for students.

H. Bidasiuk gives a proper place to reading texts with simultaneous translation: 'In the context of using translation in learning a foreign language, there is little talk about the effectiveness of reading texts with parallel translation, although the issue is now relevant, as books in the original with several translation options have become more accessible. There are many websites where parallel texts are selected for each pair of languages, software and instructions are printed in several languages simultaneously.' The researcher goes on to explain the strategy of working with parallel texts, which depends on the language ability and the goal set by the student... The reader receives a huge amount of vocabulary with a ready-made translation and the context in which it is used. The motivation to clarify the meaning of structures and lexical items is high, because without a full understanding of the previous fragment, it is impossible to continue reading further. In other words, this method allows you to kill two birds with one stone - learn the language and enjoy the book [3].

O. Galashova proposes the principle of the 'round table' in the formation of English communicative competence. 'The form of the 'circle', when the participants of communication look into each other's eyes, clearly observe the facial expressions, gestures, and expressions of the interlocutors, gives a special character to the discussion as the main activity at the 'round table'' [5].

It should also be noted that there are many AI-based platforms that allow you to communicate while partnering on a joint project (for example, Media Osvitoria launched ENgin) of an educational or business nature. And practical creative projects

take place during the organisation of seminars.

Thus, practice is a necessary component for the effective development of communicative competence, because without direct contact with the language and its active use in real-life situations, it is impossible to achieve a high level of proficiency.

2.5. AI tools as didactic means of developing English communicative competence

Developing communication skills is crucial for personal, professional and social growth. They help you build healthy relationships, achieve career success, develop as a person and maintain emotional balance. The better your communication skills are, the more effectively and comfortably you interact with other people and achieve your goals. This is the main motivation for developing English communicative competence, which is to make the process of learning English enjoyable, interesting and real. If students realise that language skills open up new opportunities for communication, self-development and achievement of goals, it will be much easier to find motivation to continue learning.

With regard to teaching English language competence, it can be noted that in today's world, English language proficiency is an important component of both personal and professional development. Education should focus on a comprehensive approach, which includes not only mastering grammar and vocabulary, but also developing communication skills in a variety of contexts. Improving English language competence is not only a matter of language practice, but also of cultural understanding, the ability to negotiate effectively, and adaptation to global processes. In this process, both individual achievement and group interaction are important, allowing students to share experiences, ask questions and solve problems in the context of language use. The development of metacognitive skills is also important, as they help learners to plan their learning, assess their progress and adjust their language learning strategies, making the process more effective.

In the context of communicative didactics - teaching and learning as a

communicative process - the main goal of teaching English is to develop students' communicative competence, which is defined as the ability to communicate effectively in English in different areas, topics and situations using appropriate language material. Increasing the effectiveness of the process of developing students' English communicative competence depends on a number of conditions, among which the key ones are: 1) use of a set of authentic materials; 2) learning English in connection with cultural and humanitarian disciplines (the principle of interdisciplinary integration); 3) interactive involvement in English-language communication using methods and techniques of contextual communication technology; 4) stimulating students' motivation; 5) creating a supportive social and psychological environment [12].

As can be seen from the previous sections, modern methodological research indicates the potential of new educational technologies and methods that should be used within the communicative approach to teaching. In this context, it is important to specify the essence of innovative technologies for the development of English communicative competence. Artificial intelligence can be an extremely useful tool for teaching communication in English, providing both students and teachers with new opportunities for developing language skills.

We can analyse the most commonly used techniques.

1. Interactive chatbots. AI chatbots can act as a conversational partner for English language practice. They can engage in dialogues to help learners improve their skills in real time. In particular, platforms such as Duolingo or Babbel use AI to organise learning processes, adapting lessons to the individual needs of each learner. This opens up opportunities to practice English 24/7, without the need to interact with real people, and it can support a variety of topics and situations for training.

2. Individualisation of the learning process. AI can analyse a student's strengths and weaknesses and offer personalised exercises and tasks. For this purpose, algorithms are used that take into account the level of knowledge, progress, typical mistakes, etc. This makes it possible to create the most effective and adapted approach to learning. The benefits include quick course adjustments and reduced stress, as students receive tasks that match their current level. Content personalisation is a

modern trend, so AI will only help in this case.

3. AI pronunciation analysis: There are technologies that allow you to analyse your pronunciation by comparing it with native speaker models. Tools such as Speechmatics or Google Speech-to-Text can detect pronunciation errors and provide feedback. This way, you can improve your pronunciation with accurate and instant feedback. And the app is convenient, but it requires a lot of independence and commitment from the student.

4. Automated systems for checking written works. AI also helps in the automatic assessment of written works. For example, platforms such as Grammarly use artificial intelligence to detect grammatical, stylistic, and spelling errors, allowing students to improve their texts before they receive feedback from their teacher. The app generates an instant analysis of written texts, which helps to correct errors quickly.

5. Training listening skills through adaptive systems. Interactive audio and video exercises where students can listen and answer questions with the help of AI can effectively train listening comprehension. Platforms such as EnglishClass101 use adaptive technologies to select appropriate materials for each student, which helps improve listening comprehension. At the same time, real-life situations on various topics with different levels of difficulty are modelled.

6. Gamification of learning. AI allows you to create gamified tasks and simulations that encourage students to learn more actively. Through the use of game elements and a progressive level of difficulty, students can compete, get points and achievements, which increases their motivation.

7. Use of AI in multimedia materials. The use of AI to create multimedia materials, such as video tutorials, animations, or interactive maps, helps to make the learning process more engaging and accessible to students. For example, interactive videos allow learners to choose their answers or reactions to situations, thus increasing their participation in the learning process. It is highly effective through teacher engagement, technology and a variety of content formats, and provides the opportunity to practice speaking and communication skills in a realistic setting.

Thus, the use of artificial intelligence in English language teaching can

significantly improve the efficiency of the process, making it more accessible, interesting and personalised. AI is becoming an important tool in modern teaching methods, enabling each learner to work at their own pace and receive real-time feedback. It should be noted that artificial intelligence is not responsible for the consequences of its actions. And this is extremely important to understand. Although artificial intelligence can perform complex tasks and make decisions based on the analysis of large amounts of data, it does not have the consciousness and ability to independently assess the consequences of its actions. This poses challenges for us in terms of regulating and controlling its use, especially in situations where decisions made by AI systems can have serious consequences for people.This observation underlines the need to develop appropriate ethical standards, legislative initiatives and control mechanisms to minimise the risks and negative consequences of the introduction of artificial intelligence in various spheres of life.

However, innovative technologies do open up new opportunities for interactive learning and allow for more effective language competence development, particularly in English. They make it possible to create a dynamic environment that encourages students to actively use the language through real-life situations and adapts to the individual needs of learners. It is important that these technologies not only complement traditional methods but also create opportunities for practical language use, which is one of the key aspects of communicative competence. The integration of new methods such as gamification, virtual discussions or simulations of real-life situations can significantly improve the learning process and make it more engaging and effective.

It is important to interact, even with the help of artificial intelligence. The phenomenon of 'communicative interaction' is gaining popularity due to various approaches and interpretations. It can be seen as an element of the strategy of communicative behaviour, an act of information transfer, a process of mutual influence on communication participants and cooperation, which results in the acquisition of valuable experience of relationships and knowledge exchange. In the context of teacher education, the development of communicative interaction competences becomes both

the goal and the result of learning, as it is an important aspect of the professional profile of a modern teacher. Interaction at the level of communicative didactics contributes to the development of metacognitive skills - the ability to plan, analyse and adjust the learning process in accordance with the goals and results achieved.

It can be noted that artificial intelligence can become an important tool in creating a communication environment, as it can process large amounts of information, automate interaction processes and help analyse data to improve communication. However, it is important to emphasise that artificial intelligence cannot completely replace the human factor in communication, as the emotional component, deep understanding of the context and cultural differences remain important for effective interaction.

2.6. Motivation as a didactic method of activating communication activity and forming communicative competence

Communicative activity is always a combination with the individuality of another person, the specifics of his or her speech and personal perception of the realities of communication. However, the barriers that arise in the process of communication between people with different temperaments, upbringings, and worldviews block the achievement of understanding [5, 148]. The process of forming a motive, defined as motivation, takes place in several stages: the emergence of a certain personal need; comprehension and justification of the choice of subject and method of satisfying the need; the emergence of intention and motivation to achieve the goal.

Motivation in the pedagogical context is the process of activating students' interest, needs and internal desire to learn. It can be external (support from the teacher, rewards) or internal (the desire for self-improvement, satisfaction from the learning process). However, in the pedagogical process, motivation is not only a condition for learning, but also one of the most important didactic techniques aimed at creating favourable conditions for learning. It is based on these principles that we will consider

motivation for the formation of communicative competence, but with an emphasis on communicative didactics.

So, let's take a closer look at **motivation as a didactic technique.**

Use of interesting and relevant tasks. The use of tasks that meet the interests and needs of students helps to engage them in the learning process (for example, the training 'Interviewing for a first job').

Motivation through positive emotions: Encouragement, praise, emotional support and incentives to continue learning create a positive emotional climate that increases students' desire to learn.

Setting clear and achievable goals. Setting specific, achievable learning goals helps students focus on the outcome and see the value of the learning process.

Game and interactive methods. The use of game elements, role-playing games, discussions that encourage students to actively participate in learning and make the process feel like an interesting activity.

Competition and cooperation. Motivation by creating healthy competition among students or organising teamwork can encourage them to achieve high results.

Showing real learning outcomes. Demonstrating to students how their knowledge is applied in real life can increase their interest in the subject and learning in general (for example, inviting a mentor to a lecture or seminar).

The motivation to develop communication skills is multifactorial and may include both personal and external factors that form a personal desire to improve in this area. Personal motivations include the following: the need for self-expression - people who want to express their thoughts, feelings and ideas may feel motivated to develop communication skills; the need for social interaction - for people who want to establish and maintain relationships with others, developing the ability to communicate effectively is an important factor; interest in new knowledge and experience - learning new cultures, languages or communication technologies can stimulate the desire to develop communication skills; developed emotional intelligence (the ability to understand and control one's emotions and those of others) can contribute to the motivation to improve communication skills; self-esteem - people with high self-

esteem may be more inclined to develop their communication skills, while people with low self-esteem may need help or encouragement to improve these skills. Extrinsic motives are social environment, educational process, career needs. But these motives can move from one category to another.

An external motivational factor is learning. Scholars (in particular, L. Onufrieva, O. Tchaikovska) increasingly agree that 'that is why higher education faces the task of training competent, competitive specialists who are able to adapt to changing socio-economic conditions, navigate information flows, ready for further continuous professional self-development and self-realisation, able to meet the ever-changing requirements of the market environment in the context of European integration, to respond adequately and adapt to the complex conditions of modern society' [24]. The role of teachers (mentors, tutors, curators) is to support and encourage the development of communication skills. In our opinion, teaching itself involves targeted education, or rather, the formation of motives through the organisation of various types of communicative tasks in which students will definitely need to speak, because otherwise the student's work in class will not be evaluated. To provide motivation for mastering communicative competence in the classroom, you can use conversations, discussions, trainings, problematic teaching and speaking situations.

It is quite logical to conclude that motivation for active communication activity contributes to the improvement of communication skills and abilities, and on the other hand, communication as a speech influence on students through suggestion, persuasion, examples, and experience transmission contributes to the formation of motives to learn and communicative growth. That's why communicative didactics as a teaching model is justified.

So, how does communication affect student motivation? The question has many answers, but they all depend on the creation of pedagogical conditions, which we describe below.

Pedagogical condition 1: **Creating an atmosphere of trust and mutual respect.**

Through effective communication, the teacher can create an atmosphere where students feel comfortable and their opinions and ideas are valued. This is important for

developing motivation, as it creates a sense of security that allows students to express their ideas openly, even if they are not entirely sure of the correctness of their thoughts.

Pedagogical condition 2. Encouragement of independent work.

Motivation through communication helps students develop the ability to work independently and organise their own learning. Through questions, discussions and feedback, it is important for students to receive not only information but also support to further improve their skills, which increases their motivation for self-study.

Pedagogical condition 3. Learning through practice.

Practical classes, role-playing games, project activities are methods that are also used in communicative approaches to motivation. They allow students to feel like participants in real-life situations where knowledge and skills have practical application, which is an important incentive for deeper learning.

The main thing, as L. Berezovska notes, is to reveal to students 'the prospects for the effective use of acquired knowledge, skills and abilities in future professional activities, to form their ability and internal need for continuous learning, self-education, self-improvement and self-development' [2, 16].

It should be noted that it is motivational goals that determine the 'communicative potential' of an individual. For example, personal and social motives (the desire to establish business relationships, achieve career success, gain support in personal relationships or participate in social movements) express the active position of a student, a future specialist, and stimulate an increase in the level of his or her communicative ability. Or, for example, the goal of convincing the interlocutor, sharing an idea, getting support) forms the strategy and tactics of communication activities. Such targeted self-programming for effective negotiation or directing a communicative situation in a favourable direction is the engine that motivates communicative growth.

Conclusion.

Communicative didactics is a theoretical framework for teaching that focuses on the development of students' communication skills and the effective use of means to achieve learning goals. It integrates the principles of communication and learning, contributing to the formation of competencies in communication and interaction in the educational process. This model successfully implements the following modern approaches to the organisation of learning: communicative, personality-oriented, dialogic, contextual, interactive, emotional and value-based. These principles themselves are aimed at developing students' skills in effective communication, cooperation, creative thinking, flexibility and adaptation to a dynamic social and cultural environment.

Communicative activity as a complex pedagogical category requires a conscious, purposeful approach to the formation of communicative competence from participants in the educational process in higher education. It promotes social adaptation, identification and presentation of the individual, ensures professional growth, and enables intercultural interaction in the globalised world. By the way, the importance of English-language communicative competence should be emphasised here, as it is a requirement of the times. Communicative competence is not only knowledge of the language and language system, but also the ability to use it, convey knowledge, convey emotions, think logically and structured, which allows you to effectively build arguments and understand the interlocutor's point of view. Communicative competence as the ability to realise one's well-being in society is formed during education, as it is at this time that students finally complete the formation of themselves as individuals. That is why the role of the teacher (mentor, organiser, mentor, motivator, facilitator, communicative leader, innovative teacher, 'integrator of educational technologies', etc.) is very important. The role of the teacher as an integrator of educational technologies is especially important in the era of artificial intelligence: to boldly master its capabilities, not to be afraid to use it in teaching, but always competently, following critical thinking, and the ethical laws of working with information.

Motivation to improve communicative competence as a didactic technique is especially necessary in the context of rapid progress of society - it demonstrates the importance of achieving goals (from the formation of internal motives to a clear understanding of how to implement them in one's own life). Motivation helps students to adapt to trends, new requirements, and competition, because the ability to communicate means the ability to interact - to shape their well-being and living space. However, effective motivation is possible only in favourable pedagogical conditions: in an atmosphere of trust and respect, encouragement to work independently, demonstration of examples and life experience.

Artificial intelligence is developing rapidly and is being implemented in all spheres of social life. In education, it has gained particular importance in distance learning, when communication interaction between participants in the pedagogical process takes place through the mediation of technology. AI-based communication requires additional functional skills (from the correct formulation of a communication task to critical reflection on the generated information and the formulated response).

However, the prospects for communicative didactics in the era of artificial intelligence are obvious: the creation of personalised learning, global educational communities, innovative approaches, and work with digital tools will force the integration of multicommunication approaches into the learning process - from virtual laboratories to simulated reality, etc. That is why the capabilities of artificial intelligence are indispensable here.

KAPITEL 3 / *CHAPTER 3* [3]
NON-FORMAL EDUCATION AS AN EFFECTIVE TOOL FOR PROMOTION ENGLISH IN TEACHING AS A FOREIGN LANGUAGE AT TECHNICAL UNIVERSITY

Introduction

The increasing public concern of the society about educational issues is fueling debate among experts and doing various researches for better understanding of development goals and ways how they could be achieved and promoted for a learner. Education continually adapts to new changes, making it essential for educators to actively engage with these transformations. This is particularly relevant for foreign language teachers, who must constantly refine their strategies and methods to provide students with different and effective tasks that prepare them for real-life communication in professional environments. The advanced twenty-first century skills are being updated and employers are introducing new requirements to twenty-first century professionals. A new generation of learners is trying to be competitive at the labour markets and solve their life and educational problems through lifelong education.

The education system is divided into formal, non-formal or liberal and informal. They have similarities and differences but they have a few goals in common – knowledge, skills and abilities, which should be obtained for further development of an educated and competitive professional in the world. Higher education institutions are using new innovative technologies to improve the quality of education and provide students with a modern interactive learning experience focused on student`s development and motivation. The results of scientific research are proving to be the foundation on which educational sustainability can be formed. These days' students have a lot of opportunities to receive professional education both traditionally and through non-formal education. The existence of many professionally related resources

is very important in the modern world. Government officials have developed the regulations on formal, non-formal and informal education. According to the Law of Ukraine on Education, a teacher can choose the form and structure of teaching that they consider to be the most effective. The country recognizes all types of education and improves conditions to develop the educational activities that provide appropriate educational services, and motivate learners to obtain all types of education (Law on Education, 2017).

The delivering of advanced technologies, high quality educational services and educational materials to the teaching learning process in formal and non-formal education in recent years has organized, structured and activated specified learning objectives. A lot of scientists believe that non-formal education is one of innovative approaches to students lifelong learning outside of formal education that provides access to education for those who have not had access to it, and also notes that it can improve the efficiency of educational services. Any organised educational activity external the existing formal system that is designed for different groups of learners and has defined learning objectives (Coombs, Prosser, & Ahmed, 1973; Colardyn, 2001).

The importance of non-formal education should be considered in terms of three main functions of learning: educational, upbringing and personal growth. The main strategies of non-formal adult education include the following:

1) development and updating of adult learners' knowledge in the context of a rapid process of information updating;

2) providing education to all groups of the adult population, eliminating bias

3) focus on specific educational needs of different social, professional, demographic groups;

4) activation of cognitive activity, practical use of the acquired knowledge;

5) acquaintance of adults with knowledge and skills in previously unexplored areas to meet the needs of the labour market;

6) creation of non-formal education centres for adults;

7) formation of worldview, development of self-awareness, moral qualities and aesthetic feelings;

8) development of creative abilities, improvement of professional skills;

9) validation and recognition of results;

10) increasing motivation for continuous learning, absence of coercion;

11) formation of internal responsibility of adults for the results of educational activities (Coombs, Prosser, & Ahmed, 1973; Henschke, 1998; Abela, 2009; Colardyn, 2001; Beatriz Pont, 2004; Cameron, 2012; Livingston & Cummings-Clay, 2023), (Lifelong Learning and Adults. OECD: Education Today, 2013).

The analysis of the educational process of many countries allows us to state that non-formal education is an important component of the national educational system as a developed socio-pedagogical phenomenon that functions supporting access to a varied range of educational resources. Non-formal education allows creating conditions for the comprehensive development and formation of the individual, active independent cognitive activity and gaining practical experience that contributes to the formation of general and professional competences and the possibility of applying them in the period of socio-cultural and socio-economic transformations (Cameron & Harrison, 2012; Thoidis, 2014). The advantages and benefits of non-formal education are numerous. Students can learn by own pace and in any convenient time. Such education enhances learner's motivation and as a result improves their outcomes as well as supports teachers with educational tools for effective lesson management. The main disadvantage of non-formal education is that it does not provide an opportunity to obtain qualifications according to the educational levels of the national standard, but it does provide an opportunity to deepen and broaden the student's knowledge, improve skills and abilities, and obtain a diploma or certificate of completion of courses, seminars, distance learning courses, etc. Informal education provides an opportunity to attend extra lectures, watching educational videos, reading scientific or technical literature, communicating with colleagues and partners, etc. (Stavytska, Kutsenok, Yamshynska & Kriukova, 2023; Abela, 2009; Ajani, 2021).. The absence of certification and recognition of results reduces the value of non-formal education as a compensator for traditional education that leads to full-time employment of adults in a profession. Non-formal education is a means of acquiring effective and functional

knowledge and skills that are then useful in everyday and professional life (Pandya, 2010; Luukannel & Manninen, 2017; Saloheimo, 2016).

Recognition and validation of prior learning and training outcomes, including non-formal education and training outcomes, is one of the key issues of educational policy in the country, due to the intensive development of non-formal education, which, in turn, is a consequence of humanity's transition to the information and knowledge society. Competences acquired in different contexts and environments become visible, identifiable, assessed and accepted: formal recognition is granted. The recommendations to validate non-formal and informal education was firstly published both by the European Commission and Cedefop. (European guidelines for validating non-formal and informal learning, 2015).

Validation of learning outcomes focuses only on acquired competencies wherever and whenever, on their value and relevance. Its main goal is to make visible learning outcomes. At the same time, recognition and validation of non-formal education outcomes enhances the professional self-identification of an adult, stimulates the interest and need for education throughout life, and increases the competitiveness of the adult labor market (Saloheimo, 2016).

The universities officials develop their recognition procedure, the content of the validation of learning and training outcomes of non-formal education and analyze the features and mechanisms for recognizing and confirming the qualifications, learning and training outcomes received during the non-formal education of the students as well as determine the possibilities of using positive countries experience in Ukrainian universities independently support the organizational aspects and the evaluation methods (Order of the Ministry of Education and Science of Ukraine. On the approval of the procedure for recognizing the results of studies in higher and professional pre-higher education obtained through non-formal and/or informal education), (Stavytska, Kutsenok, Yamshynska & Kriukova, 2023)

Non-formal education is usually got through educational programs and does not mean the receiving of state-recognized educational qualifications, but could end with the receiving of professional qualifications. Non-formal education involves

professional courses/training, civic education, online education, professional internships, etc. Informal education or self-education involves the self-organized learning of certain competencies by a person, as a rule, during everyday activities related to professional, social or other activities, family or leisure (Regulations on the recognition of study results at Igor Sikorsky Kyiv Polytechnic Institute acquired in non-formal/informal education).

Students can get the corresponding grade at the university if they take Massive Open Online Courses (MOOCs). They can choose from a large number of the courses, including Coursera, Prometheus, Udacity, EdX, Future Learn, Canvas Network and many others. These platforms offer more than thousands courses of different specialisations. When a student successfully complete the course, he/she receives a certificate. According to the Regulations of the university, not only online MOOC courses, but also international language certificates give the opportunity towards the maximum score in the Bachelor's degree Foreign Language discipline if the student has an international foreign language certificate at the B2 level or higher. (Regulations on the recognition of study results at Igor Sikorsky Kyiv Polytechnic Institute acquired in non-formal/informal education).

3.1 Analysis of recent researches and publications

It is essential to define the term 'non-formal education', which is an organised process in which unique knowledge is created, within which adults develop; use their own capabilities in social relations and various activities; increase the level of knowledge, skills and ways of expressing and understanding them; relate their own thoughts and feelings to those of other people. (Lifelong Learning and Adults. OECD: Education Today, 2013). The definition of non-formal education is usually vague. However, it is impossible, indeed pointless, to give a universal definition. Non-formal education is a flexible system that can take many different forms, in response to different requirements and needs of different individuals or groups (Pandya, 2010;

Saloheimo, 2016).

Comprehensive definition of non-formal education was given by J. Bjørnåvold, who described it as a learning tool to support adult students during the lifelong educational process always taken into account such important factors as learners' opinions, views and perspectives; as a means of delivering appropriate methods, techniques and tools. J. Bjørnåvold considers non-formal education as an innovative approach to lifelong learning beyond formal education emphasizing that the functions of non-formal education can only be outlined in relation to a particular context (Bjørnåvold, 2000).

Philip H. Coombs defines adult learning as any organised educational activity outside the existing traditional (formal) system, has specific learning objectives that was developed to compensate for the shortcomings and contradictions of the traditional education system and to meet the often urgent needs of certain groups of people who are bypassed and left out of formal education. This explains the interest of adults in a form of learning that more effectively meets and responds to their needs. For this reason, goals can only be developed individually, depending on the needs of the individual and, accordingly, the specific territorial context (environment). For this reason, non-formal education cannot be 'centralised', as the formal education system is still less institutionalised (Coombs, Prosser, & Ahmed, 1973; Pandya, 2010).

The experts on non-formal education state that the main features of non-formal education can be defined as follows:

- the many and varied forms that non-formal education can take;

- the ability to adapt to the needs of adults and the society in which they exist;

- the functional nature of its context in relation to specific conditions;

- specific goals are short-term and limited to the requirements of society or a particular group;

- curricula are designed to meet specific, previously identified needs of learners and society;

- flexibility in its implementation;

- heterogeneity of target groups;

- flexible requirements for learners compared to formal education;

- systematic and organised activities should never be routine (Fordham, 1993; Cameron, 2012; Brookfield, 2015; Luukannel & Manninen, 2017; Saloheimo, 2016; Livingston & Cummings-Clay, 2023).

The defining characteristics of non-formal learning are:

- alternative to academic education;

- absence of generally accepted fixed and unified learning objectives;

- individual definition of the goal, which may change according to the current needs of society;

- absence of (does not imply) awarding of qualifications;

- consciousness of the organisation of learning and educational influences;

- development of life, labour and vocational skills;

- promotion of social, economic and cultural development;

- personal responsibility of participants;

- activity and equality of all participants. (Brookfield, 1986; Brookfield, 2015; Boateng, 2009; Luukannel & Manninen, 2017; Saloheimo, 2016; Livingston & Cummings-Clay, 2023).

Stephen D. Brookfield highlights that non-formal education provides equal opportunities for students, but it is not a substitute for traditional education (Brookfield, 2015).

Principles justify the methods and techniques of teaching, influence the choice of content, forms and methods of organising the learning process. Adding to this definition, Sharan Marriam explains that in order to build and organise effective learning activities (formal or informal), you need to know about the characteristics of the learners, the context of their learning and the learning process. According to Sharan Marriam non-formal education is a powerful and proven approach to teaching and learning that is based on one incontrovertible reality: people learn best through experience. Sharan Marriam offers a systematic and up-to-date statement of the theory of non-formal learning and its modern applications to education, work, and adult development (Marriam & Brocket, 2007).

A great number of scientists have studied the role of non-formal education as the most significant factor for sustainable development of the society. Lavrysh & Lytovchenko say that higher education plays the key role in the dissemination of the sustainable development principles and values by providing upgraded interdisciplinary learning opportunities and educational resources (Lavrysh & Lytovchenko. 2019).

Zygmunt states that English is the language of the 21st century, and there are many connections between English and Education for Sustainability, English can be used to challenge this century's worldviews (Zygmunt, 2016). Education is regarded in these studies as a key component to support the development of knowledge and all necessary skills and values, which are significant to build a sustainable world.

The appearance of new values in societies and the corresponding public attitude to the role and importance of non-formal education requires appropriate scientific justification and the search for scientifically practical means of study. According to experts, the theoretical aspect of non-formal education is sufficiently underdeveloped, as evidenced, in particular, by the fact that the scientific literature uses various terms that reflect the specifics of such education: non-formal education, informal education, liberal education. Analysis of approaches, concepts and models of non-formal education, the effectiveness of its use in the process of education of specialists in various specialties, methods and forms of training and retraining contributes to awareness of the problem of improving education (Payne, 2006; Colardyn, 2001; Boateng, 2009). That is why it is important to specify the current areas and prospects for the development of educational activities, to identify promising ways to improve this area in the context of non-formal education for foreign language teaching.

3.2 Non-formal education as a key aspect for achieving true goals and learning effects in the learning teaching process of foreign language

Based on the theoretical analysis of scientific works, it has been defined that non-formal education is an extremely relevant scientific challenge, since such education

allows a student to study systematically focusing on professional tasks, striving to achieve the goal. There is a need to set goals and objectives, the ability to design ways to achieve them, readiness for their implementation. Non-formal education is also important because there is an intensive formation of civic consciousness and emotional sphere (Stavytska, Kutsenok, Yamshynska & Kriukova, 2023). Non-formal education that has a great educational potential, with the ability to respond flexibly to the educational needs of the students and create an information layout, positive psychological climate for those who set achievable short-term and long-term goals and seek to study. Non-formal education not only provides students with practical knowledge and skills, but also makes them self-confident, life and work ready. The opinion of A. Rogers on the principles of applying educational technologies in the process of adult learning is correct: individualisation, development of creative abilities, self-realisation, motivation, cooperation and activity (Rogers, 2007; Rogers & Naomi, 2010).

Review researches have shown that effective non-formal education is a key aspect for achieving true motivation and learning effects in the learning teaching process of foreign language. Teachers of the universities take into account the advantages and disadvantages of non-formal education for further improvement of the educational process. The methodology of formation of foreign language competence through non-formal education activities has been developed and tools for assessing the levels of formation of foreign language competence have been substantiated. The positive impact of non-formal education seemed to be on general skills and language skills. The biggest impact was on their confidence in using language. This is particularly important in language producing skills such as speaking, writing, translation and communication where the criteria, indicators and levels of development are identified (Downey, 2003; Jarvis, 2004; Brookfield, 2015; Marriam & Brocket, 2007; Mezirow & Taylor, 2009).

To survive in today's fast-paced information world, a person must not only be spiritually rich, but also should navigate the rapidly changing information flow, be able to learn on their own, constantly improve himself or herself broadening their knowledge. Mastering a foreign language is becoming one of the important

components in the content of educational activities for the students of technical specialties. Language teaching in a technical educational institution should aim to develop students' communicative skills, to use expressive means of language, styles, genres, and forms in different types of linguistic activities freely and successfully. (Lytovchenko, Ogienko, Kriukova, Meleshko, Yamshinska, Voronina & Kutsenok, 2022).

Many current researchers have conducted their studies on non-formal and informal language learning and proposed a theory of providing informal activities in foreign language teaching learning processes. The researchers give the analysis of the experiences and perceptions of online web-based and digital tools that provide interaction with English outside the university classrooms. Students' preferences clearly lean towards using technologies that offer entertainment elements such as films, YouTube and social media, and they should be convinced of the importance of language based technologies such as online grammar, language learning websites or courses (Álvarez, Montoro, Ana de Medeiros Kelly & Hazard, 2020; Yurieva, Musiichuk , Baisan , 2021). The researchers concluded that online language learning is a first preference for students, but further research is needed to experiment on professional language learning using web-based experiences. Among the most popular options for language learning, students noted web-based learning (for example, using an app, watching movies, and taking an online course) (Álvarez, Montoro, Ana de Medeiros Kelly & Hazard, 2020). The researchers state that the students prefer online web-based language learning, but further research is needed to experiment with professional language learning using web-based experiences. Web-based learning (e.g., using an app, watching films, and taking an online course) was among the most popular language learning options students mentioned (Álvarez, Montoro, Ana de Medeiros Kelly & Hazard, 2020). As for the results, the researchers concluded that there is a relation between joining non-formal education and students' progress in English language. Non-formal education may help students to improve their English language performance because non-formal education is flexible and practical, which perhaps enables students to understand foreign languages better. Another aspect that

may enhance students' performance in English is motivation (Marliasari, Oktavian, 2019).

Stavytska I., Kutsenok N., Yamshynska N., Kriukova Ye., Marliasari S., Oktavian R. describe a methodology for providing non-formal education activities for the development of foreign language competence of students at technical universities. They analyze modern educational documents, define criteria, indicators and levels of non-formal education in teaching English as a foreign language at technical university; investigate experimentally the effectiveness of the technique. The authors of the study developed a methodology for the formation of foreign language competence of future engineers in non-formal education, the diagnostic tools for assessing the levels and defined criteria, indicators and levels of formation. The criteria for assessing the levels of foreign language competence formation through non-formal education have been defined as: linguistic, professional and motivational. They introduce the correlation of criteria and indicators of formation of foreign language competence through non-formal learning of students of technical specialties (Marliasari, Oktavian, 2019; (Stavytska., Kutsenok, Yamshynska & Kriukova, 2023).

The linguistic criterion indicates the development of: listening, professional writing, speaking and reading skills related to the specialisation, and one can add the equally important ability to translate texts related to the specialisation. The professional criterion refers to the work on professional skills, mastering professional vocabulary, and advancing technological skills. The motivational criterion indicates an increase in internal motivation to learn a foreign language, interest in studying professional disciplines, and a desire for personal growth. There are three levels of foreign language competence formation: advanced, sufficient and low (Stavytska, Kutsenok, Yamshynska & Kriukova, 2023).

3.3. Non-formal education activities for the development of foreign language competence of students at technical universities

Both theory and practice of foreign language teaching should be oriented to the needs of society, especially the labor market, taking into account the motivation of personalities, skills, abilities and potential of learners. Employers and the labor market place new demands on modern education, which is responsible not only for the learning process, but also for forming a system of professional and individual values of learners. Today, experts are widely discussing the issue of relevant learner training for current changes in society and labor market requirements. Of particular scientific interest is the review of pedagogical and psychological sources on the problem of foreign language teaching at technical universities (Henschke, 1998; Stern, & Kaur, 2010; Huggins & Stamatel, 2015).

The results of a study conducted showed that non-formal education teachers consider the interactive learning technologies to be the most effective ones of organising creative interaction of learners, which contributes to the discovery of new knowledge, gaining of new skills (Brookfield, 1986; Caffarella, Daffron, 2013). It should be noted that when using interactive technologies in non-formal education, a teacher becomes a consultant who helps, guides, advises their students on how to solve a problem. This suggests that the use of interactive technologies in non-formal education allows moving away from the usual logic of the teaching learning process, which involves moving from theory to practice, and start with the formation of new experiences that are gradually theoretically comprehended.

Taking into account scientific sources we note that the technology of interactive learning is considered as one based on interaction between participants in the learning process; organisation of joint activities based on dialogue learning methods; as a way of organising cognitive activity taking into account adult needs, interests, personal and professional experience. Effective implementation of interactive learning technologies in the practice of non-formal education involves defining the principles of using integration technologies. These include the principles of: dialogic interaction, game

(active role-playing) activities, cooperation and collaboration, training activities (Fordham, 1993; Knowles, 2005; Brookfield, 2015; Marliasari, Oktavian, 2019; Jarvis, 2004; Brookfield, 2015; Marriam & Brocket, 2007; Mezirow & Taylor, 2009' Havrylenko & Meleshko, 2022)

Under objective conditions, technical universities cannot provide students with perfect knowledge of a foreign language, but they can develop self-education skills that will allow students to improve their knowledge of a foreign language or master a foreign language in the future in accordance with the demand of the society and the level of personal professional needs.

Due to the rapid development of innovative technologies and the increase in the volume of scientific and technical information, the practical importance of scientific and technical translation has increased. If necessary, students of technical specialties who, for objective reasons, have not mastered the absolute level of their communication to the level of native speakers of a foreign language should be able to analyze various elements of the text and translate scientific and technical literature correctly. Therefore, with only 2 hours of practical English classes per week, the teacher, whenever possible, systematically explains and demonstrates the most important lexical, grammatical and stylistic features of the language for translating scientific and technical literature. The main forms and methods of interactive learning are: conversation, discussion, creative solution of situations, round table method, training, project method, game methods, as well as mentoring, coaching, small group learning, storytelling, shadowing, secondhand, budding, narrative method, and others.

Vocabulary knowledge of technical English is an important tool necessary for students of technical specialities. Words make it possible for people to express their thoughts and understand others. Thus, it is natural that mastering a foreign language begins with vocabulary learning, which becomes the foundation for the development of other language skills: reading, listening, speaking, writing and grammar. Learners cannot understand what they read or hear, neither can they speak or write if they do not understand the meaning of words. In this context it seems highly appropriate to quote Wilkins who wrote, "There is not much value in being able to produce grammatical

sentences if one has not got the vocabulary that is needed to convey what one wishes to say ... While without grammar very little can be conveyed, without vocabulary nothing can be conveyed". (Wilkins, 1972).

The analysis of studies shows that teachers are interested in the methods of teaching translation of scientific and technical texts. In their works, scientists cover theoretical and practical issues of the methods of teaching translation of scientific and technical literature, which undoubtedly contributes to active learning. I. Semkova notes the importance of studying the peculiarities of organizing training in translation of scientific and technical literature, as an independent type of translation, with the aim of effective and balanced enrichment of future specialists (Simkova, 2017).

N. Bidnenko traces some language peculiarities of modern English scientific and technical and analyses the linguistic features of scientific and technical literature, the peculiar language constructions and the ways of their translation (Bidnenko, 2014).

Having analyzed educational resources, we can state that the translation of scientific and technical literature has appropriate tools, strategies and methods that contribute to the formation of professional skills and values.

The selection of material should be done in such a way as to demonstrate these features of the language in texts from different specialties. The sample texts should be practiced on original texts of literature, which should be arranged in order of increasing difficulty. You should also practice works of fiction, the purpose of which is to expand the vocabulary of students of technical specialties and to introduce them to expressions and terms that they may need in conversations on various topics, but which are not usually found in scientific and technical literature (Herbert, 1965; Bidnenko, 2014; Simkova, 2017; Lytovchenko, Ogienko, Sbruieva & Sotska, 2018).

The language of scientific and technical literature is characterized by a large number of special terms, but this fact does not reduce the number of commonly used words and phrases. A significant number of such words are polysemantic words. In order to determine their meaning, it should be taken into account lexical structures and relations in addition to grammatical features. In other cases, the correct choice of the lexical meaning of polysemantic words requires taking into account their grammatical

connections (Herbert, 1965; Bidnenko, 2014; Yukhymets, 2019).

For students of technical specialties, mastering the rules for using certain grammatical phenomena becomes quite problematic, and therefore each grammar unit should include a certain number of grammar exercises that are arranged in a progressive manner, from simple to more difficult, which facilitates the learning of the rules (Simkova, 2017; Bidnenko, 2014; Yukhymets, 2019).

It should be noted that the language of scientific and technical literature is part of the national language, but it has its own personal style that meets the goals and objectives of the content of scientific and technical literature. The translation of terms and grammatical structures has certain peculiarities: the presence of special subject terms; the use of abbreviations in texts; the peculiarity of translating grammatical structures; and the expansiveness of the speech. Scientists point out that the stylistic feature of such texts is conciseness, comprehensiveness, and transparency of expression (laconicism, conciseness and clarity of formulation). The main requirements for a high-quality translation are: clear interpretation of the original text; accurate expression of thoughts in a simple, laconic and concise form that is inherent in the style of the native language of scientific and technical literature; full compliance with the generally accepted norms of translation of the native literary language (Simkova, 2017; Bidnenko, 2014; Yukhymets, 2019).

N. Bidnenko, I. Simkova trace some language peculiarities of modern English scientific and technical literature style that influence mainly the specific character of its rendering into Ukrainian. The author analyses the linguistic features of scientific and technical literature, the peculiar language constructions and the ways of their translation. Students who want to become a scientific translator and be engaged in scientific and technical translation must meet some requirements outlined by the London Institute of Linguistics. The students of technical universities should follow the requirements they must have:

1) extensive knowledge of the subject matter of the technical text to be translated according to specialisation;

2) a well-developed visual ability allowing the translator to visualise the

equipment or process being described.;

3) intelligence to fill in missing links in the original technical text;

4) a sense of context that allows choosing the most appropriate equivalent term on the subject;

5) ability to use native language with comprehension, briefness and accuracy;

6) practical experience in translating related fields. (Bidnenko, 2014).

A technical translator is sure to be to be a scientist, a linguist and a writer. Some translators specify knowledge that is crucial to working with scientific and technical texts. The experts specify three types of knowledge:

1. Knowledge of the text structure in different languages.

2. Knowledge of the subject area.

3. Knowledge of the language of special purposes of the area (Bidnenko, 2014). The scientific and technical style also differs from other literary styles in the usage of specific grammar forms, constructions and tenses (Herbert, 1965; Bidnenko, 2014; Yukhymets, 2019). According to Chernovaty, Karaban, Omelianchuk, N. Bidnenko, I. Simkova the defining characteristics of modern English scientific and technical literature include specialized vocabulary, precise use of terms and scientific concepts, an extensive layer of formal and bookish-style words, and frequent use of gerund and participle constructions. Additionally, abstract nouns derived from verbs and adjectives, strictly logical syntax, well-structured sentence order, explicitness, objectivity, impersonality, clarity, and a lack of emotional expression contribute to the distinct style of this discourse. Scientific and technical writing prioritizes conciseness and accuracy to ensure clear communication of complex ideas. In this context, the role of the scientific and technical translator is crucial. Their primary responsibility is to convey information effectively in the target language, ensuring seamless communication rather than simply converting words from one language to another. A translator does not merely translate words but interprets their intended meaning within a given context. In this way, a scientific and technical translator functions as both an intercultural communicator and a cross-disciplinary writer, bridging linguistic and professional gaps between different fields of expertise. (Simkova, 2017; Simkova,

2018; Yukhymets, 2019; Bidnenko, 2014; Herbert, 2011; Chernovaty, Karaban & Omelianchuk, 2006).

Dudeney notes that computer technology greatly facilitates learning technical terminology, transforming routine tasks into engaging language-learning experiences. Additionally, complex grammatical structures can be repeatedly practiced as many times as needed on a case-by-case basis. Computer technology makes learning technical terms much easier, turning boring exercises into interesting tasks in a new language world (Dudeney, 2007).

Thus, learning to translate scientific and technical literature is a complex process that requires constant interaction from all its participants, with students playing the main role in this process, and the teacher providing qualified support.

The views of Arti Kumar, a specialist in personal and professional development planning, are worthy of attention, who identifies a range of skills that ensure the development of professional prospects and subsequently contribute to successful employment and optimal adaptation to the rapidly changing requirements of modern employers. The list of such transferable skills, regardless of the field of employment, should include the following characteristics:

- self-control and self-promotion,

- self-awareness and active planning,

- communication and negotiation skills,

- ability to work in a team and co-operate with all its members,

- resistance to change and uncertainty, and others.

3.4. Technical students' preparation for real professional communication in a foreign language professional environment

Since the modern world is constantly changing and effecting all fields of human existence there is no learning process without teachers who are actively involved in these changes. Such a process is sure to refer to foreign language teachers focused on

constant improving of techniques to provide technical students with the tasks to be interesting and productive and could ensure proper preparation for real professional communication in a foreign language professional environment.

Developing speaking competence of technical students is a crucial aspect of foreign language teaching in non-formal education. Successful language learning cannot be achieved without enhancing professional speaking skills. The non-formal educators explore the most effective tools for improving the speaking abilities of technical students and establish principles for structuring the foreign language learning process to facilitate their mastery of spoken communication (McCall, Padron, & Andrews, 2018; Dudeney, 2007; Hoge, 2014; Thornbury, 2005; Ur, 2012; Simkova, 2019). To identify the most efficient strategies and contemporary approaches for teaching speaking skills to technical students, an analysis of various scientific studies and scientific researches on this issue was conducted. The main forms and methods of interactive learning are: role-play method, conversation method, discussion method, workshops or mini-conferences, where students actively participate in discussions, creative solution of situations, round table method, training, project method, game methods, as well as mentoring, coaching, small group learning, storytelling, shadowing, secondhand, budding, narrative method, and others. (Bush, 1997; Thornbury, 2005; Chappelle, 2003; Barkley, 2009; Hoge, 2014; Simkova, 2019; Jarvis, 2004; Brookfield, 2015; Marriam & Brocket, 2007; Mezirow & Taylor, 2009).

Thornbury highlights the complexity of improving speaking skills, emphasizing that communicative competence involves not only the ability to construct grammatically correct sentences and pronounce them properly but also the capacity to interact effectively, providing appropriate responses in dynamic real-world conversations (Thornbury, 2005).

A simple online search provides a vast set of exercises and tasks, enabling students to assess their language proficiency, listen to native speakers, and access numerous foreign language resources. Regular independent practice is essential for continuous progress, as limited classroom time at technical universities allows instructors to only outline key language features. Engaging in additional language

exercises and tests significantly enhances students' linguistic proficiency. Extra classes in non-formal education can help the students to improve language skills. This innovative tool allows students to test language level, listen to and communicate with native speakers as well as have access to a great number of various resources of a foreign language.

Teaching speaking skills to technical students requires careful consideration of several challenges, including:

1. Adapting educational materials for groups with varying levels of communicative competence;

2. Encouraging active student participation and overcoming psychological language barriers;

3. Differentiating between error correction in speaking and writing;

4. Integrating speaking skills while acknowledging interpersonal communication principles. (Downey, 2003; Thornbury, 2005; Havrylenko, & Meleshko, 2022).

Currently, foreign language classes at technical universities often take the form of workshops or mini-conferences, where students actively participate in discussions. An integral part of the functioning of non-formal education is coaching, which is defined as: a type of teaching learning in the form of communication aimed at revealing the capabilities and potential of the students; the art of creating an educational environment to improve learning outcomes and ensure the conditions for the development of the learner. (Downey, 2003; Havrylenko & Meleshko, 2022). The essence of coaching corresponds to the essence of non-formal adult education, allowing to analyse the educational needs of students, specify their goals, and help in achieving them by creating appropriate conditions, updating existing social and professional experience. According to the teachers, coaching is a leading teaching method, the students gained confidence in their abilities to grow professionally and socially (Downey, 2003; Jarvis, 2004; Brookfield, 2015; Marriam & Brocket, 2007; Mezirow & Taylor, 2009).

A role-playing method is one of the most effective techniques for improving speaking skills in technical students. Role-play is a structured speaking activity in which students assume specific roles within professional contexts. The primary

objective is to promote spontaneous and free communication in a foreign language environment. This method enables teachers to address several instructional goals, including recreating real-life professional scenarios, reinforcing grammatical structures, and fostering a comfortable classroom atmosphere. Such a kind of communication is a combination of spontaneous and planned.

A storytelling method has been used in non-formal education. It was developed and first used by David Armstrong, the head of an international company, to shape corporate values and company culture. The essence of the method is the broadcasting of stories that most fully reveal and illustrate certain values, information, events, problem solving, etc. The method of storytelling through stories and narratives allows for better memorisation, increases the significance of learning and has a better impact on people's behavior (Huggins & Stamatel, 2015; Nikitina, Lakiychuk & Meleshko, 2022).

One of the important characteristics of a student's learning process is the appeal to their personal and professional experience. Therefore, the narrative method is one of the leading and even mandatory teaching methods in non-formal education. It is often used because the content of learning meets the needs and interests of the student, and thus is directly related to the existing life experience and the need to solve certain problems. At the same time, according to K. Gergen, the narrative method allows us to touch the inner world of a person, their perception of the world, thoughts and beliefs (Gergen, 1994; Huggins & Stamatel, 2015).

It is important to note that the narrative method allows not only comprehending the previous experience of a student, but also its inclusion in a new experience, so teachers consider the composition of a narrative as an effective means of achieving the goal of speaking (Hopkins, 1994; Kenyon & Randall, 1997).

Most exercises of each method follow a structured sequence:

1. Preparation: Context analysis, vocabulary study, grammatical structure practice, and reading supplementary materials.

2. Assignment and comprehension check.

3. Enactment: Students engage in dialogue while the instructor monitors their

performance.

4. Discussion: Teachers pose questions related to both the conversation's content and linguistic accuracy (Gergen, 1994; Hopkins, 1994; Kenyon & Randall, 1997; Yamshynskaya & Kryukova, 2023).

In our opinion, an interesting and effective method of teaching in non-formal education is the method of budding, which can be defined as assistance and partnership. Budding is sometimes called informal mentoring or peer coaching, as it is characterised by full equality of the learning subjects. There are recommendations for using the buddying method in the learning process: be sure to create an atmosphere of trust; understand the needs and expectations of the learner; formulate goals to be achieved; do not impose your opinion, respect the other; strive for interactive communication. It should be noted that the buddying method is especially often used in non-formal learning (Noonan & Erickson, 2018).

An effective and efficient method in non-formal adult education is the simulation method, which is associated with the reproduction of a real life situation. It belongs to the game methods that are widely used in non-formal adult education. At the same time, the simulation method differs from other game methods in that it is aimed at developing decision-making skills, assessing the consequences of one's actions, and its feature is the immediate reaction of the learner to the simulated situation and the ability to replace external factors of motivation to learn with motivation by the situation or by experience. The simulation method is valuable not for its inclusion in a certain type of activity, but for the result that a person receives at the end of the game. The simulation method in non-formal adult education is the activity where the adults themselves in real situations that force them to make quick decisions and form soft skills, teach mutual assistance, etc. (Brookfield, 2015; Bennett, 2006; Barkley, 2009).

Many scientists emphasise the importance of using dialogic teaching methods in non-formal education, in particular, the method of dialogue, discussion, brainstorming.. Dialogic methods are called methods of 'searching for understanding because there is an exchange of opinions between its participants, which leads to the synthesis of their experience, better understanding of the problem and finding its

optimal solution. The discussion method is one of the most effective teaching methods widely used in non-formal educational practice. Mostly, discussion sections are organised to discuss problematic issues. It is advisable to organise discussions based on the principle of transformational consideration of the problem through a combination of theory and practice. For learners, the personal significance of the discussion topic and its results are particularly important. (Jarvis, 2004; Brookfield, 2015; Marriam & Brocket, 2007; Mezirow & Taylor, 2009).

Effective implementation of each speaking method requires clear instructions from the teacher, allowing students to consolidate their technical knowledge and apply their foreign language skills in professional contexts. The success of the activity depends on students' professional competence, language proficiency, and creativity. The importance of a teacher in the foreign language classes has significantly evolved. They now act as supervisors and facilitators, guiding their students through communicative activities while managing time effectively. Students are encouraged to take a more independent and creative approach to developing their speaking skills. Modern information technology plays a crucial role in simplifying this process; primarily through Internet access (Jarvis, 2004; Marriam & Brocket, 2007; Yamshynskaya & Kryukova, 2023).

An important issue in teaching English to technical students is error correction in speaking. While both teachers and students often view error correction as a fundamental aspect of language learning, recent studies indicate that the frequency of corrections does not significantly impact speaking accuracy.

The communicative approach to language learning assigns a minor role to error correction, viewing authentic communication as the key to developing fluency. Immediate correction of speaking errors can hinder students' confidence and create psychological barriers to communication. Unlike traditional teaching methods, modern approaches encourage teachers to prioritize free expression over linguistic perfection, treating errors as a natural part of the learning process.

Hoge argues that error correction slows down language acquisition, negatively affecting students' motivation, speaking speed, and fluency. Instead, the

communicative approach advocates for developing speaking accuracy through exposure to authentic audio and video resources, repeated practice, and memorization of linguistic patterns. Emphasizing idea expression over grammatical correctness fosters a more relaxed and effective learning experience (Hoge, 2014).

Common causes of speaking errors include:

1. Native language interference: Students apply grammatical structures and vocabulary from their first language.

2. Overgeneralization: Students rely on known language rules without fully understanding the exceptions.

3. External factors: Fatigue, distraction, or stress can impact language performance (Hoge, 2014).

The approach to error correction should align with the teaching methodology, students' proficiency levels, and the duration of the language course (Hoge, 2014).

Foreign language teachers have access to numerous effective tools for developing students' speaking skills, making the learning process more diverse, productive, and engaging. The success of language acquisition depends on multiple factors, particularly the teacher's approach to error correction. Instructors can enhance students' speaking abilities by creating a supportive speaking environment, introducing compelling discussion topics, and designing specialized exercises that foster interactive and lively communication.

Using a social network to teach speaking provides real language interaction, helps to develop speaking practice in certain contexts, and to understand the language through observation and experience, which is an aspect of language acquisition that is often overlooked in textbooks (Blattner, Fiori, 2009). As a rule, students face some problems when performing oral communication exercises in the classroom: they are afraid of making mistakes in their speech, do not have a sufficient vocabulary to express their thoughts, and therefore do not feel comfortable. To overcome this problem, the teacher should look for effective ways.

The 21st-century teaching and learning process necessitates a transformation of traditional education by incorporating innovative methods, techniques, and strategies.

These enhancements are essential for equipping students with the necessary skills to be competent, think creatively, and solve complex, interconnected real-world problems.

Bachelor's students undergo training based on educational and scientific programs developed in alignment with European integration processes in Ukraine's higher education system. These programs aim to create a professionally oriented and scientific environment. The training includes a comprehensive set of disciplines, ranging from fundamental subjects to those directly related to professional activities across various scientific fields. Teachers must have a deep understanding of the specifics of professionally oriented education.

In the context of foreign language teaching, a key focus is preparing technical students for the exam they take at the end of their fourth year. The exam assesses their ability to apply acquired knowledge and demonstrate their actual level of foreign language proficiency. It is crucial for students to understand the exam's format and requirements. Teachers play a pivotal role in this preparation, ensuring that students are well-versed in the exam procedures, the principles of task creation, and the evaluation criteria.

Exam preparation has become an integral aspect of foreign language instruction, proving its effectiveness in evaluating students' knowledge. Language testing fosters the development of various competencies by enhancing awareness of different language activities, including information extraction, analysis, processing, and usage. Moreover, students gain confidence in their language abilities when they engage with real-life tasks during testing (Bennett, 2006; Chappelle, 2003; Grabe & Stoller, 2018; Saricoban, 2011; Stojkovic, 2019).

The objective of foreign language instruction in non-formal education systems is to define the unique aspects of exam preparation, particularly for technical students. A crucial aspect of this preparation is equipping students with the necessary skills to tackle exam challenges effectively. Each higher education institution, and by extension, each faculty, has its own exam requirements based on current curricula. Teachers must guide students in mastering exam tasks, regardless of format, despite

limited practical instruction hours. Exam tasks should comprehensively reflect the thematic units outlined in the English for Specific Purposes (ESP) curriculum. During preparation, teachers help students organize learned material and identify key areas that require special attention (Chappelle, 2003; Grabe & Stoller, 2018).

Foreign language teachers continually seek to improve existing teaching methods by designing engaging and effective exercises that enhance exam readiness. Teachers should direct students' focus towards activities that foster linguistic competence, ensuring that the required proficiency level is met according to faculty-specific foreign language curricula. By creating learning activities that incorporate real-exam challenges, students can develop the problem-solving and critical-thinking skills necessary for effective exam performance and broader innovative thinking (Saricoban, 2011; Stojkovic, 2019).

Foreign language exam preparation should include tasks that challenge students in the following ways:

1. Finding solutions to problems or deciding on task execution strategies.
2. Completing unfamiliar tasks with guided instructions.
3. Producing written work that meets specific requirements.
4. Effective exam tasks should:
5. Be tested and validated by foreign language specialists.
6. Generate diverse ideas and alternative solutions.
7. Involve multiple procedures applicable to the task.
8. Provide coherent solutions.
9. Be designed in accordance with exam requirements.
10. Incorporate specific, well-defined contexts.

Students should be capable of producing structured, interconnected ideas rather than isolated thoughts. Successfully integrating exam preparation into foreign language instruction for technical students requires addressing specific language challenges. The primary competencies tested include listening, reading, grammar, vocabulary, writing, and speaking. The preparation process is most effective when all these components are systematically combined within both classroom instruction and independent study

(Saricoban, 2011; Stojkovic, 2019).

A particularly challenging aspect of exam preparation is developing oral communication skills. Beyond constructing grammatically accurate sentences and proper pronunciation, students must also be able to respond swiftly in real-life interactions. Training technical students in oral communication requires special attention, as language proficiency levels often vary within the same group. Teachers must implement strategies that engage all students, ensuring full participation in oral communication activities.

Effective exam-related learning activities integrate theoretical knowledge with practical applications, allowing technical students to be fully prepared for their foreign language exams. Teachers must understand both the subject matter and the technical background of the issues addressed in exam tasks, alongside fundamental language competencies.

Well-structured exam preparation has significant potential for enhancing foreign language education. When properly designed and systematically implemented, it supports students in mastering technical language use within an exam setting. However, such preparation requires substantial effort from educators, who must possess strong pedagogical and subject-specific knowledge. Nevertheless, this teaching approach yields positive results, as it fosters high motivation among students, accelerates learning, improves language retention, and enhances professional communication skills in the long term (Bennett, 2006; Chappelle, 2003; Grabe & Stoller, 2018; Saricoban, 2011; Stojkovic, 2019)..

Language is considered to be a mirror of society, reflecting its development and serving as an essential tool for communication. Modern scientists view language as a dynamic system that continuously evolves, updates, and enriches itself with new lexical units related to real-world contexts. As a flexible system, language constantly adjusts to the changing requirements of human existence and communication, influencing the addressee. This process results from external influences and the demands of human interaction.

Language is not only a means of expressing thoughts and facilitating

communication but also a reflection of the spiritual and cultural life of any nation. There is no "social" or "asocial" aspect of language since its primary functions include communication and representing human environments. Studying a language provides insights into social, cultural, scientific, and technological advancements that address people's needs more effectively (Lytovchenko, Ogienko, Kriukova, Meleshko, Yamshinska & Voronina, 2022).

An urgent task of modern linguistics is the study of new lexical units and their formation. Since English is the language of international communication, scientific progress, and technological development, most new lexical units emerge in English-language media, where their formation and evolution can be observed. In this study, we aim to analyze new lexical units that have entered the English language in recent years through media resources and have become widespread on the Internet.

The rapid development of society leads to the need to constantly replenish the vocabulary, because the emergence of new objects and phenomena requires appropriate names. This process is closely linked to technological, economic and social developments, the removal of barriers, and the globalization of languages and cultures, leading to the enrichment of languages with new concepts. Therefore, for correct and accurate translation, it is important to determine the peculiarities of the formation of new lexical items in a language. According to the third edition of the Oxford Dictionary, set to be published by 2037, linguists estimate that approximately 4,000 new words are introduced into the language annually (Oxford English Dictionary online, 2011).

A specialist in any field who can easily navigate professional terminology is in great demand because of their readiness for productive communication and confidence in professional activities. Learning professional terminology helps to improve the quality of the ESP teaching process and, accordingly, the development of students' language skills. Being the basis of any professional language, a term is the core of professionally oriented vocabulary. One of the main tasks tor ESP teachers to provide students with knowledge which can help them analyse the main characteristics of terms, their peculiarities, international vocabulary and the main difficulties students

face in the practice of translating terminology (Stern & Kaur, 2010; Voronina, Meleshko, Kriukova & Yamshynska, 2022; Yurieva. Musiichuk & Baisan, 2021).

Learning professionally oriented vocabulary is a complex and challenging experience. Many research on the problem of organising the relevant teaching process in non-formal education, identifies effective strategies and interactive tools for learning professionally oriented vocabulary. New methods and forms of teaching have become widely used. The teachers examine the positive aspects of non-formal education in special educational settings, highlighting the most common problems that arise in the process of learning professional terminology. The most effective methods and forms of teaching learning professionally oriented vocabulary by students of technical specialities have become widely used. (Stern & Kaur, 2010; Voronina, Meleshko, Kriukova & Yamshynska, 2022; Yurieva. Musiichuk & Baisan, 2021).

Numerous studies investigate the linguistic phenomenon of neologisms, which has accelerated significantly in the current century across all languages. Scientists continuously study this evolution and note that, like nature, language is never static. Stagnation is merely a deceptive phenomenon; the supposed stability of language is just a special case of its dynamic nature.

Vocabulary evolves and improves annually, adapting to societal demands and needs. However, there is no universal consensus on the definition of neologisms. In modern linguistics, different terms such as "innovation," "new formation," "new creation," and "neologism" are used interchangeably. E.F. Skorokhodko, for instance, introduces the term "neonym" to refer to neologisms in terminology (Skorokhodko, 2004).

The emergence of new vocabulary is primarily driven by two factors: the necessity of naming a new phenomenon and the desire to assign a new name to an existing concept (Mazuryk, 2002). Neologisms are defined as words that did not exist in the previous period. Since novelty in time is the primary characteristic of a neologism, the "Great Explanatory Dictionary of the Modern Ukrainian Language" defines it as "a new word, word combination, or phraseological turn that appears in the language" (Busel, 2007). Neologisms are used to denote new concepts or reinterpret

existing ones, functioning in general language, national language, or literary language. Some neologisms exist only within specific texts or systems before becoming widely adopted or entering the passive vocabulary of the language (Ganych, Oliinyk, 1985, p. 151).

Many linguists view neologisms as complex entities. For example, D. Mazuryk defines neologisms as "a word or a stable combination of words that formed in the language during a certain historical period to name a new objective reality, meet all the norms of modern literary language, and enter its active lexicon" (Mazuryk, 2002). Thus, neologisms include new lexical units and meanings that may enter the current vocabulary. Although the formation of neologisms is similar across languages, English has an expanded lexical capacity due to phrasal verbs and word combinations. The English language experiences rapid lexical enrichment due to its widespread global use, particularly through Internet resources.

During the period of advanced technology, society displayed significant creativity in forming new words that not only reflected innovative language use but also provided psychological and emotional reflection of reality. Pakistani researchers analyzed how social needs influenced the emergence of neologisms and how their use impacted social media users (Maryah, Huma & Wasima, 2020). Many new words were added to English dictionaries, classified into two main categories:

1. Scientific terminology,

2. Pop culture (Roig-Marin, 2020).

Researchers assert that while new lexical units primarily arise in medical, scientific, financial, and educational contexts, their usage also reflects the evolving personal and social perceptions of individuals.

In the era of globalization, all languages, including English, are continuously evolving. This trend is evident in the frequent appearance of neologisms in online and print media. Language development closely aligns with societal, cultural, and technological progress. Like society, neologisms undergo different stages: initial creation (often in media resources), societal acceptance, and eventual lexicalization or inclusion in dictionaries for general use. The study of neologisms remains a crucial

field in modern linguistics, as it offers insight into the ongoing transformation of language in response to human needs and global changes (Stern & Kaur, 2010; Voronina, Meleshko, Kriukova & Yamshynska, 2022; Yurieva. Musiichuk & Baisan, 2021).

Language learning is a continuous process that demands daily practice in speaking, reading, listening, and writing. This process fundamentally relies on a strong foundation in vocabulary and grammar. One of the most critical aspects of learning a foreign language is developing and refining writing skills, as written competence requires not only the ability to construct grammatically correct and accurate sentences but also the skill to integrate words appropriately within real-world linguistic contexts (Beare, 2008).

Individuals write for various reasons. One key reason is that we cannot fully comprehend a person's thoughts until they are expressed in spoken or written form. Writing serves as a reflection of one's cognitive processes, professional experiences, and communication needs. Additionally, it fosters a commitment to articulate thoughts effectively while applying language skills in practice. Writing integrates multiple abilities, including sentence fluency, vocabulary expansion, and grammatical accuracy, reinforcing learned concepts and solidifying language proficiency. Writing is sure to be a language activity that requires fusion   of different skills, abilities and efforts (Master, 2004; Wilson & Glazier, 2014).

Technical students proficient in writing in a foreign language are rare, as writing is often not their primary area of interest. They tend to be concise, conveying ideas in a few words. Even those with strong verbal communication skills frequently struggle with writing. Many linguists argue that to develop writing proficiency, students must be actively engaged in the learning process. Effective classroom organization of writing exercises is essential to enhancing students' skills. Just as extensive speaking practice is beneficial, frequent writing practice helps technical students develop greater fluency. The more they write, the more naturally it will come to them (Ur, 1991; Master, 2004; Wilson & Glazier, 2014; Simkova & Bondarenko, 2020).

For technical students, mastering grammatical terminology is not always

necessary. Instead, they should focus on understanding the fundamental components of language, including parts of speech, spelling, sentence structure, and punctuation in Standard Written English. This form of English differs from spoken English and is the accepted standard in business and professional communication. Once students can identify sentence components such as subjects, predicates, and meaningful phrases, they can better understand sentence structure, subject-verb agreement, and appropriate word usage. This foundational knowledge aids in analyzing the lexical and grammatical features of technical texts and enhances comprehension ((Beare, 2008; Simkova & Bondarenko, 2020).

A major concern for educators in technical institutions is determining whether they should prepare students for all types of composition or focus solely on equipping them with the ability to write clear, detailed texts relevant to their personal and professional needs. It is essential to strike a balance by not only preparing students to work with technical texts but also equipping them with general writing skills applicable across various composition types (Beare, 2008).

One of the most effective ways to teach technical students concise and precise writing is through summary and abstract writing exercises based on authentic subject-related texts. This approach helps students extract and present the main ideas in their own words without introducing personal opinions or reactions. Summarizing and abstracting require students to identify and record key points while omitting extraneous details. These exercises not only enhance writing skills but also improve reading comprehension, as students must first engage with diverse reading materials—such as articles, book chapters, technical documents, and essays—before formulating their own interpretations (Ur, 1991; Master, 2004; Wilson & Glazier, 2014; Simkova & Bondarenko, 2020).

Teachers play a crucial role in guiding students through the writing process by providing useful strategies and encouraging practice. While understanding writing techniques is essential, regular application is what truly refines skills. Writing proficiency develops over time, requiring dedication, patience, and structured practice. The most effective way to encourage student participation is by integrating engaging,

authentic learning materials and designing illustrative and creative exercises that spark interest (Ur, 1991; Master, 2004; Wilson & Glazier, 2014; Simkova & Bondarenko, 2020).

Developing writing competence among technical students is a vital component of foreign language education. Without consistent home practice, progress is limited, as classroom instruction alone provides only a foundation. By strategically combining targeted skill development with effective implementation methods, teachers can foster both enthusiasm and success in language learning ((Beare, 2008; Simkova & Bondarenko, 2020).

3.5. Digital and web-based tools in non-formal education for teaching foreign languages

One of the primary challenges in teaching foreign languages at technical universities is the lack of student motivation. This issue raises a fundamental question: how can students acquire the necessary skills to effectively integrate technology into their learning process? The answer is clear - leveraging Information and Communication Technology is one of the most effective ways to enhance student motivation. It is essential to recognize that the learning tools and academic resources used in technical universities should be closely aligned with students' future professional activities. The synergy between advanced software, hardware, and well-trained educators enables students to develop digital literacy and prepare for global competitiveness by mastering a foreign language (Bush, 1997; Chappelle, 2003).

Web-based tools serve as valuable repositories of knowledge, offering numerous benefits:

1. Introducing innovative ways of interacting with information;
2. Enabling students to broaden their intellectual capacity;
3. Facilitating the acquisition of essential skills, competencies, and abilities;
4. Encouraging gradual improvement in language proficiency;

5. Meeting learners' needs for evidence of their academic achievements;

6. Expanding knowledge through continuous training and professional development;

7. Providing essential guidance, advice, and support during the learning process (Bush, 1997; Chappelle, 2003; Fyfe, 2015; Havrylenko & Meleshko, 2022).

By integrating web-based tools, the traditional boundaries of language education can be extended, fostering both student and teacher engagement. Many educators use social media and digital platforms to present new material, replacing conventional books, posters, maps, and handouts with interactive online resources. In this approach, the teacher serves as a facilitator, introducing the lesson, outlining key points, and guiding students through self-paced learning via web-based presentations. At the end of the session, the teacher discusses the material, clarifies concepts, addresses questions, and reinforces key takeaways. Supplementing these presentations with quizzes and tests enhances self-assessment and allows teachers to monitor student progress effectively (Grussendorf, 2005; Son, 2012; Forsyth, 2001; Fyfe, 2015).

Web-based learning materials significantly enhance traditional educational methods by incorporating audio-visual elements, animations, and interactive features. Utilizing computers in language learning engages both auditory and visual cognitive channels, increasing not only the volume of information processed but also the retention of new knowledge (Forsyth, 2001; Andujar & Çakmak, 2023).

Research confirms that web-based technologies are among the most effective tools in modern language education, as they fulfill all didactic requirements and optimize the teaching process (Bush, 1997; Chappelle, 2003; Andujar & Çakmak, 2023). Computers offer comprehensive control over the educational process and enable data-driven insights through statistical tracking. By analyzing performance metrics such as time spent on tasks, error correction patterns, and accuracy rates— teachers can assess students' proficiency and tailor their instructional strategies accordingly (Fyfe, 2015; Andujar & Çakmak, 2023; Jolliffe, Ritter, Stevens, 2001).

Computers also provide an ideal platform for self-assessment, allowing students to independently review specific topics and evaluate their overall language proficiency.

One of the most effective digital tools in this context is the multimedia presentation. These presentations allow students to engage with language learning materials in an organized and visually stimulating manner, incorporating elements such as images, audio, and video (Bush, 1997; Chappelle, 2003; McKimm, Jollie & Cantillon, 2003).

The development of effective multimedia presentations follows a structured approach:

1. Identifying pedagogical goals addressed through the presentation;

2. Defining the objectives and content of the slides;

3. Considering students' cognitive abilities and learning levels;

4. Selecting relevant multimedia elements (images, sounds, animations);

5. Structuring the text to align with multimedia presentation standards;

6. Drafting a clear and logical presentation script;

7. Using appropriate software to design the presentation;

8. Incorporating animations and voice-over effects;

9. Evaluating the presentation for alignment with educational standards;

10. Refining and correcting any identified issues (Bush, 1997; Chappelle, 2003; Fyfe, 2015; Voronina, Meleshko, 2020; Andujar & Çakmak, 2023).

By integrating multimedia presentations into language education, students benefit from dynamic, interactive, and visually engaging learning experiences. This method fosters greater comprehension and retention of new material. Examples of multimedia-based resources for foreign language instruction include:

1. Thematic flashcards;

2. Book and article reports;

3. Scientific presentations illustrating research findings;

4. Digital student portfolios;

5. Visual diagrams and charts;

6. Interactive quizzes and assessments (Bush, 1997; Chappelle, 2003;; Grussendorf, 2005; Son, 2012; Voronina, Meleshko, 2020).

In conclusion, the use of web-based tools in foreign language education not only enhances learning outcomes but also cultivates digital literacy, autonomy, and

engagement. As technology continues to evolve, integrating these tools into educational frameworks will become increasingly essential for fostering effective and innovative language learning environments (Havrylenko & Meleshko, 2022).

Conclusion

The search for new methods and means of preparing the students of technical universities for further personal and professional communication in the context of globalization and transformation is a preliminary direction of modern education. Problems of comprehensive preparation of students for professional life are constantly in the center of attention of educators. In this context, international experience is of considerable theoretical and practical interest, as the introduction of advanced educational technologies in Ukrainian realities will raise this process to a higher level. The experts highlight current trends in the development of soft skills and competencies for communication based on the latest trends introduced in foreign resources .

These days, issues related to the importance of non-formal education have been widely discussed in the teaching community. The study of successful foreign experience in the context of dynamic changes is of great interest to educators. It should be noted that the analysis of pedagogical features of the formation of skills in a teaching learning process would help to identify steps and deepen the understanding of effective mechanisms of non-formal education in Ukrainian educational institutions. We can admit that the introduction of non-formal education at universities and the development of digital competence is an effective way to build relations for effective international dialogue and address national and international challenges. Modern education cannot ignore the challenges of a globalized world, and it must emphasize the development of the life values of non-formal education in a multinational community as one of the key aspects of successful life in the future.

It has been stated that the leading and dominant technologies of technical students learning in non-formal education   are interactive technologies (game, project,

information and communication, training, problem-based, dialogic); technologies for creating personality-oriented situations, the essential characteristic of which is a combination of life context, dialogic, role-based cooperation and interaction of learning subjects; distance learning technologies, which, based on modern information methods, create fundamentally new opportunities for innovative changes in non-formal education.

The studies confirmed that students increase their confidence in using the language when the interactive approach is used in the language teaching process. There are no teachers who rarely interactive-based approach in their practice. Developing English language proficiency includes reading, writing, speaking, and listening skills in English and the educational goals of non-formal oriented teachers at the classroom are to include methods of meaningful student participation in achieving these basic language skills. The study proves that web-based learning technologies are widely used in non-formal education, which based on modern information and communication technologies, create fundamentally new opportunities for innovative changes. The majority of teachers believe that the web-based approach has a great influence on the development of soft skills.

Non-formal education in teaching English as a foreign language at technical university is characterised by flexibility in both forms and duration of training; openness and variability, practice-oriented and interdisciplinary nature of the curriculum; it is based on the concept of a 'reflective practitioner', which ensures the interconnection of theory and practice. According to experts, such education and responsibility for the results of one's own academic performance help in solving the following problems:

1. increasing the effectiveness of learning;

2. understanding the learning process itself;

3. improving self-control and other skills necessary for successful learning;

4. realising personal goals and evaluating one's own progress;

5. forming a positive attitude towards lifelong learning

6. enhancing learning outcomes

The non-formal-based learning methods allow involving a person's life experience, teaches careful analysis and the ability to make connections between facts.

Thus, interactive learning technologies used in non-formal education embody the principles of cooperative learning - voluntariness, activity, democracy, mutual assistance, mutual benefit, enabling learners to realise their personal and professional potential. The non-formal learning service, which is actively supported by many educational institutions, non-governmental organisations, associations and other providers that offer a wide variety of courses that can meet the most demanding educational needs of students.

The results of the study showed that almost every provider of non-formal education actively uses the possibilities of web-based learning technologies, the main characteristics of which are: the ability to study at a convenient time, in a convenient place, at a convenient pace; the ability to independently determine one's own educational trajectory; the ability to combine studying at courses with work); democracy, interaction, sociality and equal access to education.

In the practical experience of organising non-formal education along with traditional forms and methods of teaching, non-traditional ones are actively used. Among the most popular ones are: discussion, brainstorming, creative problem solving, collective decision-making, round table method, training, project method, game methods, as well as coaching, small group learning, storytelling, budding, narrative method, simulation method. Creating conditions for proactivity of an adult, formation of critical thinking, use of a creative approach to learning, which allows analysing and proposing solutions to problems thoroughly, from different perspectives and approaches.

It is concluded that the studied problem is relevant among both Ukrainian and foreign scientists. Further development of the outlined topic will allow national educators to get acquainted with modern approaches and effective mechanisms for the development of non-formal education for foreign language teaching. The non-formal learning approach surely is taking its important place in teaching English language proving its efficiency in this discipline.

KAPITEL 4 / *CHAPTER 4* [4]
IMPLEMENTATION OF INFORMAL EDUCATION AT THE UNIVERSITIES IN UKRAINE IN MODERN CONDITIONS THROUGH DISTANT LEARNING INSTRUMENTS AND TOOLS

Introduction.

Over the past few years, the question of using new information technologies in teaching foreign languages has been raised more and more often. These are not only new technical means, but also new forms and methods of teaching, a new approach to the educational process. The main goal of training is the formation and development of students' communicative culture, teaching practical mastery of a foreign language. The task of the teacher is to activate the cognitive activity of students in the process of learning a foreign language, to create conditions for everyone to show their activity and creativity.

The main goal is the development of new educational technologies capable of modifying traditional forms of information presentation to improve the quality of education. In today's world, the development of information technologies has a high pace. It is much easier to store videos, photos and documents on cloud resources to save device memory and have access to files from different parts of the world. The question arises of the need to use the service for educational purposes in order to facilitate the speed of completing educational tasks and checking them.

Internet helps in the formation of spoken language skills and abilities, as well as in the teaching of vocabulary and grammar, ensuring real interest and, therefore, efficiency. Moreover, the Internet develops skills that are important not only for a foreign language. This is primarily related to mental operations: analysis, synthesis, abstraction, identification, comparison, juxtaposition, verbal and semantic prediction and warning etc.

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Number of characters: *81832*
Author's sheets: *2,05*

Thus, the use of modern multimedia educational programs and Internet resources optimizes the educational process, saving time in group classroom classes with the teacher, and increases the quality of the skills and abilities produced, as well as the strength of learning the material; brings learning to a qualitatively new level. The use of ICT in the educational process in a non-language higher education institution has a pronounced educational, didactic and pedagogical orientation. The use of ICT forms self-education skills, fosters independence, develops auditory and conversational skills and abilities, which is very important for students of a technical university.

4.1. Application of concepts of non-formal education at technical university.

The renewal of the educational sector takes on a continuous nature, which ensures the development of modern higher education, which is aimed at creating conditions for the formation of a highly educated, creative, responsible, socially active, competitive modern specialist in the market of educational services of Ukraine. In the conditions of globalization, the role of a specialist of a new formation, capable of effective work and lifelong learning, who strives to improve his professional development through formal, non-formal and informal education, is constantly growing. The processes of globalization, entry into the international space are typical of Ukrainian society today and require fundamental changes and the construction of a new educational concept. The use of the concept of "informal education" became one of the principles of state policy in the field of education and expanded age boundaries in ensuring the right to education. Radical transformations in the education system, the adoption of a number of legislative and regulatory acts on non-formal education open up additional opportunities for learning that are less formalized and more innovative.

Traditional education keeps up with the pace of social development, in particular, the excessive flow of information through the global network, the Internet. It acts as an alternative, and in some cases, a competitor of formal education, and opens up additional opportunities for innovative learning, their rapid adaptation and application.

Usually, young people aged 17–25 get formal education in order to acquire basic (fundamental) knowledge in one or another field, but it is not enough for career growth, as the educational need is not fully satisfied, taking into account the specifics of the employer's activity. Therefore, the specialist needs to acquire new competencies, self-improvement, self-development through informal education [16].

Non-formal education is a new definition of modern pedagogical science. Researchers from all over the world have been actively developing this concept in recent decades. The main feature that distinguishes non-formal education from formal one is voluntariness and interest in a subject that is studied or improved throughout a person's life [19].

World experience shows that the acquisition of non-formal education is conducted using active support from the state, which provides access to education for citizens of different age groups within different periods of their lives. People who have a long break in their profession, middle-aged people who have turned out to be "redundant" in their fields or a category of citizens who do not have formal education update their professional skills through non-formal education [17].

There has been a surge of non-formal education in Ukraine now, taking on new forms and content, producing innovative techniques and methods, covering new socio-age and professional groups. The main advantages of such measures of non-formal education are independent choice of place, time, duration of study; absence of age, professional or intellectual restrictions on the participants, which helps increase motivation for learning and self-improvement. The most important thing is the ability to respond to the needs of the labor and service market increasing the age for career advancement, the involvement of leading scientists and the most experienced practitioners in teaching, the most active use of innovative approaches and testing of innovative teaching methods and technologies. It determines the fact that non-formal education begins to fulfill the function of a new provider of higher education services in the context of life-long education or "education without borders" in society[10].

We agree with the statement that the most important types of non-formal education are professional courses/trainings are trainings and/or seminars for

improving qualifications and/or acquiring new skills. As a rule, professional courses are held in short periods and in "safe space" conditions. Public education prepares the country's population, especially the youth, to fulfill their role as citizens. At the same time, public education includes non-formal social institutions (families, communities, libraries, churches, public organizations, trade unions, sports teams, election campaigns, mass media, etc.). An online course is an Internet course with largescale interactive participation and open access via the Internet. In addition to traditional course materials such as videos, reading tasks and homework. Such education provides the opportunity to use an interactive user forum that helps creating a community of students, teachers and teaching assistants. It is one of the latest forms of distance learning, which is actively developing in world education [30].

The case-study method is also actively practiced in non-formal education. Its cultural basis is the "precedent" or "case" method. A case is a description of a specific situation that has the right to exist in one or another practice. This situation contains a certain problem that needs to be solved. This is a kind of tool which helps to transfer to the classroom a part of real life or a real situation, which needs to be worked on, and a reasoned solution should be offered [30].

An extensive network of providers operates on the Ukrainian service market, the purpose of which is to promote public awareness of educational programs implemented in Ukraine. In particular, the online platform of non-formal education in Ukraine "Learn Lifelong", implemented with the support of the DVV International Representative Office in Ukraine, the International Center for Non-Formal Education and the Ukrainian Association of Adult Education, functions for Ukrainians who wish to acquire new knowledge and skills. Non-formal education services can be obtained through free online learning services: Prometheus, EdEra, Coursera, Duolingo, TED (Technology, Entertainment, Design), etc.

4.1.1. Objective reasons for obtaining non-formal education:

- the rapid rate of development of IT technologies contributes to the emergence of new professions that require the disclosure of the creative potential of an

individual;

- a change in strategy of success in society (the knowledge of graduates of educational institutions needs updating before they finish their studies, which reduces the motivation to obtain formal education);

- formal education is not perceived as a tool for building a career, but is a means of realizing the creative potential of an individual;

- formation of an active life position of a specialist is carried out through non-formal education; acquisition, improvement of professional competences; awareness of motives for lifelong learning; solving professional, social, life problems, etc.[10].

It should be noted that with the adoption of the Law of Ukraine "On Education", Articles 8 and 18 of which regulate the right to lifelong education through formal, non-formal and informal education, a new vector of the development of the educational environment has been set, which must meet the challenges of today. This law defines the following types of education:

- formal education - is obtained according to educational programs in accordance with the levels of education, fields of knowledge, specialties (professions) determined by the law and provides for the achievement by the students of education of the learning results of the corresponding level of education and the acquisition of qualifications recognized by the state;

- non-formal education – is obtained, as a rule, through educational programs and does not involve the awarding of state-recognized educational qualifications by education level, but may end with the awarding of professional and/or the awarding of partial educational qualifications;

- informal education is self-organized acquisition of certain competencies by a person, in particular during everyday activities related to professional, social or other activities, family or leisure.

Such a shift from academic to informal learning cannot be ignored, because the information age requires a person to learn throughout his life. In this context, the role of higher education institutions, whose non-formal education services can be

systematic and effective, is increasing. Many years of experience in formal higher education (educational activities and formation of competences, proven teaching methods, qualified teachers) strengthens the position of institutions in non-formal education as well. This format allows students to focus on acquiring professional skills and competencies and on the formation of soft skills in the field of communication and decision-making as well. In addition, in terms of competition in the market of educational services, those institutions of higher education that can be reformatted quickly and develop their own unique offers, will be successful.

Based on generalization of theoretical works of scientists and our analysis of the state of introduction of non-formal education of students in NTUU "Igor Sikorsky Kyiv Polytechnic Institute", it is possible to determine the prospects for the further development of non-formal education:

- popularization of the concept of lifelong education and non-formal education among students of different age groups and courses;
- development of mechanisms for integration of formal and non-formal education at the university;
- determination of criteria and quality indicators of non-formal education;
- development of a model for recognizing the results of non-formal education in formal university education;
- designing the content of non-formal education of students of technical specialties - as an additional system of formation of professional competence, focused on mastering socio-pedagogical functions and personality development of future specialists;
- determining the place of non-formal education in the educational program to ensure the possibility of additional influence on all its components: the content of education through the provision of specializations or additional educational services; expansion and dialogization of forms and methods of education; tools for assessing the level of professional competence of graduates taking into account independently acquired experience; attraction of additional resources at the expense of non-formal education providers and available material and

technical support; requirements for the activity of professors and teaching staff due to a change in the level of demands of students to establish constructive interaction; the management system of the department's activities, taking into account special courses of non-formal education, educational projects and their management;

- study, development and introduction of the best practices of implementation of non-formal education;

- consulting and psychological-pedagogical support of students in non-formal education [31].

4.2. Non-formal education as an innovative component at technical university.

If we turn to the historical factor, non-formal education institutions were not recognized as formal educational institutions for a long time, but at the current stage of the development of democratic and social education the need for non-formal education is growing considerably. As evidenced by the analysis of scientific research on this issue, the development of non-formal education is an important, natural factor in the development of democratic processes in the field of education. Its relevance is confirmed by normative documents of international organizations: UNESCO, the European Union, the UN, the EU, the International Labor Organization and the Council of Europe. A 2000 European Commission memorandum contains important recommendations for the development of non-formal education. Taking into account the development of the need of young people for lifelong learning, the knowledge, skills and abilities acquired in the system of non-formal education are becoming relevant and recognized, which takes learning beyond the clear boundaries of the institutional space, expands the opportunities for obtaining education at any time (regardless of age). Such education involves both more diverse forms and unfixed time limits for its acquisition.

The goal of educational policy is to create conditions allowing continuous

learning, obtaining general and professional knowledge and implementing an individual educational strategy. Therefore, at the current stage, more and more attention is paid to the development of the sphere of non-formal education. Non-formal education in Ukraine in the conditions of modern democratic processes is gaining popularity as an innovative component of the educational environment which requires appropriate theoretical justification and scientific and methodological support [2].

Successful completion of a non-formal education program provides access to a higher level of education where such qualifications are appropriately validated within the formal education system and is an important component of the lifelong learning concept, enabling young people and adults to acquire knowledge, skills and abilities, develop attitudes and adapt to constant changes in the social environment [2].

Thus, it must be underlined that if formal education is defined clearly enough, no complete agreement has been reached regarding non-formal education. The analysis of modern scientific sources proves that there is no ambiguous interpretation of the term "informal education" in pedagogical science.

Non-formal education is considered as:

- firstly, as any educational activity during working or non-working hours among the professionals, friends, family, which is not structured, organized or planned;
- secondly, how the educational process, which corresponds to the structure of this activity, acquires an organized form, does not belong to the state programs of compulsory education and is determined by commitment [2].

Formal education in Europe was considered to be constant, traditional and generally accepted for a long time, which has become widely spread in Ukraine. In contrast to formal, non-formal education refers to all educational programs implemented outside the formal education system, usually voluntary and short-term. These programs, unlike formal education, do not require prior training. The training process is provided by instructors. The specified form of education does not always provide for the issuance of certificates justifying the level of qualifications obtained after its completion. An important problem is the recognition of qualifications obtained in non-formal education institutions.

At the current stage, new assessment models are being created in Ukraine that are based on the conditions of validity of acquired knowledge, abilities and skills and their recognition at the state level. Non-formal education does not have programs approved by the state, but could take place under control of a higher educational institution. In other words, it is an independent form of education.

4.2.1. Theoretical approaches to non-formal education.

If we describe theoretical approaches to non-formal education, then we need to pay attention to activity and humanistic approaches.

The activity approach to education is focused on:

• reorientation of education from the traditional assimilation and memorization of ready-made forms of knowledge to the process of their acquisition and functioning;

• formation of the main types of activities - communication, cognitive and educational activities;

• purposeful formation of basic abilities and skills as mental actions based on their gradual development.

Several characteristics of the student's activity position in the process of obtaining non-formal education could be distinguished:

• sustainable educational motivation; the ability to formulate a goal and determine the conditions for its achievement;

• mastery of actions (subjective and mental), which allow solving the set tasks;

• the ability to self-control and self-assess the results of civic activity.

Therefore,the organization of informal education in the context of activity and humanistic approaches in institutions of higher education involves orientation to the personality of the student, his goals, motives, preferences, which is ensured by the use of appropriate methods and means of education, as well as the creation of the necessary conditions; taking into account individual experience[30].

4.2.2. Types, functions, methods and principles of non-formal education.

The issues of non-formal education have become very relevant in many countries

for the last twenty years. Such interest is connected with a number of changes that are currently taking place almost all over the world.

We consider the following types of non-formal education:

a) Professional courses/trainings are trainings and/or seminars for improving qualifications and/or acquiring new skills. As a rule, professional courses are held in short periods and in "safe space" conditions.

Public education prepares the country's population, especially the youth, to fulfill their role as citizens. At the same time, public education includes informal social institutions (families, communities, libraries, churches, public organizations, trade unions, sports teams, election campaigns, mass media, etc.).

An online course is an Internet course with large-scale interactive participation and open access via the Internet. In addition to traditional course materials such as videos, reading tasks and homework. Such education provides the opportunity to use an interactive user forum that helps creating a community of students, teachers and teaching assistants. It is one of the latest forms of distance learning, which is actively developing in world education.

b) Professional internship is a training of personnel at the workplace under the supervision of an authorized person after theoretical training or for the purpose of practical mastering a specialty, adaptation to service and management facilities, acquisition of skills for quick orientation in the workplace and other work techniques [24].

As it known that informal education in the conditions of social changes performs a set of functions that ensure the integrity of a new type of activity:

- adaptational - understanding and acceptance of new living conditions;
- informational - the ability to find, select, use the necessary information, improve literacy;
- developing- allows mastering new ways of activity [30].

The main method of non-formal education is *research*. A sudent conducts a multifaceted cognition of the surrounding world, which takes place at different levels: cognitive, practical and sensory.

The creative approach is implemented through various exercises. Therefore, a relevant psychological method is training consisting of various types of exercises, depending on the main goal of the training. According to the level of independence, theoretical, reproductive and variable exercises are distinguished. The organization of various forms of joint educational activities based on communication and interaction is becoming more and more important.

Analysis of situations, group discussions and business games involve active participation in collective discussion of problems, playing various roles, joint analysis and understanding of results. Joint activity allows not only to exchange certain information, but also to assess one's strengths and weaknesses more adequately - from the standpoint of others.

The case-study method is also actively practiced in non-formal education. Its cultural basis is the "precedent" or "case" method. A case is a description of a specific situation that has the right to exist in one or another practice. This situation contains a certain problem that needs to be solved. This is a kind of tool which helps to transfer to the classroom a part of real life or a real situation, which needs to be worked on, and a reasoned solution should be offered.

The main idea of the method is that it is proposed to consider a real life situation (recorded in a certain way in the form of a case), which not only reflects the problem in its description, but also actualizes a certain experience and set of knowledge that must be learned when solving this problem. Thus, one of the specific features of the case-study method is that, on the one hand, it is a special type of educational material (a case study and instructions for working with it), and on the other hand, it is a special way of using this method in the educational process.

One of the common tools, both in educational institutions and outside them, is social design, that is, the implementation of voluntary projects aimed at improving the surrounding reality. Training and implementation of own projects at the local, interregional and international level are important. Thus, the project can look like a platform for training democratic life guidelines.

However, as we have already noted above, non-formal education is not a space

for educational activity that is not limited by any framework. Therefore, it is based on certain principles. The most important concepts of non-formal education are:

- "Learning by doing" - this concept means acquiring various abilities and skills within practical activity. Thus, within the terms of non-formal education and various types of training, we primarily deal with practical exercises (for example, with work in groups or with role-playing games), which are then jointly analyzed and brought to the theoretical level.

- "Learn to interact" - this concept involves gaining practical knowledge about the differences existing among people, learning to work in a team and encouraging cooperation with others. Thus, considering a part of the training classes based on the principles of non-formal education, we pay special attention to working in small groups and to the high-quality development and clear implementation of the rules of working in a group within training. It is important to remember that people learn most effectively from each other and in groups; individual training is often a form of training directed against human nature and is often less effective and efficient.

"Learn to learn" - this principle involves acquiring the skills of searching for information and processing it, analyzing one's own experience and identifying individual educational goals, as well as the ability to apply all of the above in various life situations [1].

We would like to point out the peculiarities of using non-formal education as an innovative component in a technical university, taking into account the fact that the students of NTUU "Igor Sikorsky Kyiv Politechnical Institute" have been studying in a mixed format since 2021 due to the pandemic and later because of the war in Ukraine. University teachers widely use the platform Prometeus, Moodle, Sykorsky, etc., where students, who do not have the opportunity to attend all classes online, are offered to complete online courses to cover missed classes partially or fully. The practice of crediting the results of international language exams is also widely used (if we mean learning a foreign language). Therefore, non-formal education is partially present in the process of learning at a technical university as a part of educational programs[30].

4.3. Informal education as an alternative for obtaining quality higher education in Ukraine

The key resource of a digital society is citizens who know how to use digital technologies for their own needs (self-realization, work, recreation, education, leisure), as well as for the achievement and implementation of common economic, social and public goals. In this regard, the formation of digital skills and competences of specialists acquires special importance, which cannot be realized without the transformation of education. The tr ends in modernization of education depend on the needs of the labor market, which has recently been very dynamic. Digital transformation of education opens wide prospects for increasing the efficiency of the educational process. In particular, in the conditions of rapid development of digital technologies, educational trends are also changing, the consideration of which will allow educational institutions to make corrections in aspects of their activities for the training specialists in accordance with the needs of the development of a modern digital society.

The concept of lifelong learning, which first appeared at the end of the 20th and the beginning of the 21st centuries, is based on the need for lifelong learning in the modern technological world. Informal education is one of the trends in modern education, which is now an important component of lifelong education, in particular in connection with the accelerated aging of knowledge.

Informal education is the acquisition of new knowledge about various aspects of life through learning using various courses, interest groups, master classes, etc. In the framework of in formal education, as a rule, no prerequisites are required for starting education (preliminary training, age limits, etc.), there are no strict requirements for the place, time, terms, forms and methods of education, which allows a much larger number of people to be included in the learning process than in formal education. Mobile technologies in education are used in such main areas as mobile learning and the use of mobile devices as an auxiliary tool in educational process.

Usually, mobile learning is understood as the use of mobile technologies both separately (for example, a distance learning system for mobile devices) and together

with other information and communication technologies (ICT) to organize the educational process regardless of place and time. One of the most common ways of using mobile technologies in education is the principle of BYOD (Bring Your Own Devices). It isrelated to the use of smartphones, tablets, netbooks and other digital devices for educational activities.Informal education is the process of obtaining education that is not regulated by the place, term and form of education and does not involve obtaining documents on education of the state model.The field of in formal education implemented at the university includes individual classes(certificateprograms, trainings, short-term courses), which havepractical short-term goals. In most cases, informal education provides students with obtaining relevant practical and theoretical knowledge, skills, mastering modernmethods of solving professional tasks, increasing the level of their professionalcompetence, improving existing knowledge and their self-development.Everyone who wants to, regardless of their age, gender or profession, has theopportunity to get informal education.

Thus, learning results obtained simultaneouslycould be re-enrolled to students in their formal education, i.e. students have theopportunity to receive a final assessment on individual disciplines for the knowledgegained in individual classes not only at the university, but also outside of it. The main principle of activity of modern educational systems is the involvement of a person in learning throughout his\her life. The development of lifelong learning together with the accumulation of a knowledge by society became one of the social consequences of globalization and informatization. Education could no longer be limited to a few years or even decades at the beginning of a person's life, because the continuous updating of information requires constant self-improvement and learning to achieve success in life. An essential element of lifelong learning is in formal education.

A key characteristic of informal education is that it is a supplement and/or alternative to formal education in learning throughout a person's life. Training in such programs is often conducted to ensure the universal right of access to education. Informal education is available to people of any age, but it does not necessarily have a directed structure; it may be short in duration and/or low in intensity; and it is usually

organized in the form of short-term courses, workshops or seminars.Informal education is education that is acquired, as a rule, through educational programs and does not involve the awarding of state-recognized educational qualifications by education level, but may end with the awarding of professional and/or partial educational qualifications.

It should be noted that expanding informal education application could be useful:

- for society as a whole (promoting democratization, development of publicsociety, social activity and leadership; solving the problem of leisure time for young people and the elderly);

- for formal education (the ability to respond to the needs of the labor market and services flexibly and quickly, meeting the requirements of students, workers and employers and supplementing educational offers; increasing the motivation of participants in the educational process, their personal interest);

- for the participantsof the educational process (the possibility of self-improvement and self-esteem development; development of social skills; developinga sense of belonging, solidarity; optimal combination of freedom and responsibility; possibility of independent choice of time, place andduration of study) [29].

4.4. The role of information technologies in modern scientific research and publication.

Information technologies are today embedded in almost every human pursuit in the fast-changing landscape of the 21st century; scientific research and publication has not been left behind. This is most notable in scientific research and publication than any other human activity. It has changed how data is gathered, findings are analyzed and research work shared by the introduction of modern computing devices, data analytics as well as digital communication platforms. This might explain why the pace of research exponentially increased. Technologies assist researchers in structuring and formatting scientific articles, which plays a key role in the writing process. Search engines can provide recommendations on the general structure of an article according

to IMRAD standards and other academic norms. The IMRAD acronym consists of the following sections: Introduction, Methods, Results, Discussion. IMRAD is a widely accepted structure for many scientific articles, especially in the natural sciences and medicine. However, variations of this structure can exist depending on the specific journal or publication requirements, sometimes including sections like Acknowledgments and always References, where authors list the sources used in their research. The importance of high-quality scientific writing is evident [6].

Modern resources assist authors in correcting grammatical and stylistic errors, enhancing the overall quality of the research (e.g., Grammarly). They can check the correct use of terms, punctuation, and sentence structure, ensuring a professional appearance for the publication. Additionally, correcting stylistic flaws and providing recommendations for improving text clarity can help scientists communicate their ideas more effectively to the audience. Using tools that manage citations automatically can be beneficial, for formatting sources for publication. These resources, like citation generators and reference organization software make the process easier by arranging and formatting references according to styles such, as APA, MLA or Chicago. By inputting source details these tools can generate citations and bibliographies reducing mistakes and saving time for researchers and writers. Additionally many of these tools seamlessly work with word processing programs and online databases making it easier to handle and update references while writing. One of the key requirements for inclusion in scientometric databases is the originality of the article. Language-information technologies can help detect any signs of plagiarism and provide recommendations to avoid it. Plagiarism detection tools like Turnitin, Copyscape, and others have become integral parts of the process of confirming the originality of scientific articles [27].

Machine learning can be used to recognize patterns in scientific texts, automatically classify and analyze data. This can be useful for automatically detecting new scientific trends, analyzing texts for specific keywords or topics, and supporting decision-making in scientific communication. The use of modern technologies aids all aspects of scientific activity, including literature analysis, data analysis, visualization,

and planning, which are necessary for writing scientific articles [26].

Scientists should view modern technologies as essential tools for intensifying the scientific search process and embrace them as an integral part of modern scientific practice. Deserving recognition and widespread adoption, they help ensure the advancement of scientific knowledge and achievements. The use of technological resources facilitates the work of teachers. scientists in the preparation of publications. Scientists should participate in seminars, conferences and improve professional development in order to learn the latest technological resources that facilitate and optimize their work [35].

4.5. ICT integration into the educational process and their use in non-formal education

The Internet found application in science, education, communication, mass media, including television, in advertising, trade, as well as in other areas of human activity rapidly. The first steps in introducing the Internet into the education system showed its enormous potential for its development. At the same time, they denoted difficulties that must be overcome for everyday use of the network in educational institutions. However, it must be taken into account that this requires significant costs for the organization of training compared to traditional technologies associated with the need to use a significant number of equipment (computers, modems, etc.), software (learning technology support), as well as the preparation of additional organizational methodical assistance (special instructions for students and teachers), new textbooks and study guides [28].

Currently, there is an accumulation of experience, a search for ways to improve the quality of education and new forms of using ICT in various educational processes. Certain difficulties in the use of ICT in education arise in connection with the lack of not only a methodological base for their use, but also a methodology for developing ICT for education, which forces the teacher to focus in practice only on his own experience and the ability to search for ways of effective application of information

technologies empirically. Thus, now ICT plays a significant role in any industry and is being integrated into a variety of fields, including banking, media, government, and more. Knowledge in the field of ICT is already necessary in the 21st century.

Therefore, it is necessary to integrate ICT into the educational activities of students, creators of the current and future society. There is an opinion that you cannot give what you do not have. Therefore, if teachers are to form the next generation, then they must have necessary knowledge and skills of ICT to be able to provide necessary education with the help of ICT to their students. If they fail to master this, students, who are often much more ICT literate than their teachers, will use technology only for entertainment and other unnecessary purposes and may not be able to appreciate ICT as a learning tool. Therefore, it is extremely important that teachers can use ICT properly and effectively in the teaching process. Indeed, in a comparative study of pedagogy and the use of ICT at schools in 22 different countries, it was found that teachers' pedagogical and technical competence in the field of ICT are important predictive factors for the implementation ICT in the actual process of teaching and learning. In addition, if teachers improve their ICT skills, the integration of ICT into the curriculum would be easier for them. In addition, teachers who are more confident in using ICT can focus more on pedagogical issues rather than technical skills [11].

The benefits of ICT integration into teaching and learning largely depend on how the teacher selects and organizes ICT resources and how they are integrated into learning activities. The teacher's pedagogical approach, and therefore, the adopted pedagogical justification, is a decisive determinant of learning outcomes thanks to ICT integration. There is an evidence that educators need to make more sophisticated pedagogical considerations when planning and teaching to incorporate technological literacy into their student learning. In addition, teachers' pedagogical thinking is influenced by their beliefs about the value of ICT for learning and the nature of a successful learning environment [13].

ICT is represented as a tool that supports the learning process, keeping students interested in learning and encouraging them to search for information with the help of these tools. Therefore, the teacher must provide his own example of ICT use,

demonstrating interest in integration and use of ICT. When we talk about non-formal education or an alternative learning system), our primary concern should be for out-of-school youth and adults who are unlikely to enter formal school in the future. The growing importance of non-formal education is now being recognized by educators, as well as interested parties, since it is very contextual and gives graduates another chance to continue their studies [12]. Proponents of non-formal education claim that after the effective implementation of this system, the attendance and results of graduation courses will increase, as well as a significant decrease in the dropout rate.

4.6. Using the Google Classroom service as a tool of distant learning for teaching students at the university.

Today, the world is moving at a great speed along the path of scientific and technical progress, and no one will be surprised if a pupil or student has a computer, smartphone or tablet PC with Internet access. Scientific and technical progress integrated in the educational process. A modern educational activity is impossible without the use of information and communication technologies (ICT), without a combination of traditional teaching methods and methods with ICT tools. In addition, the teacher has a powerful and effective technical tool - Internet technologies. The use of Internet resources in educational institutions of various levels and profiles has long become a general standard international practice, such as distance education. Such a transformation allows to diversify training, transfer part of the classes to the online space which does not require the constant physical presence of the student and the teacher in one place at a certain time. The scale of the introduction of Internet technologies into the educational process is determined by the reasonable desire of its participants to make learning more effective and interesting, on the one hand, and less time-consuming and time-consuming, on the other. This process is facilitated by the continuous development of various virtual platforms and services, which are freely distributed by software product manufacturers in the academic environment.

In this regard, the problem of finding and choosing accessible and easy-to-use information and communication technologies for distance learning which would ensure the creation, transfer and storage of educational materials, active communication and support of the educational process in institutions of higher education, is becoming very relevant. Today, one of the most popular services for teaching students is Google Classroom (https://classroom.google.com), the use of which allows you to organize the effective interaction of all participants in the educational process, distribute educational material and provide the necessary software for the purpose of performing various educational tasks, evaluation of educational achievements of education seekers.

The free web service Google Classroom was created by Google only five years ago, which allows us to call it confidently one of the newest methods of working with students. In Ukraine, it attracted the attention of specialists in the field of education management, teachers. From the beginning, the main goal of this application was to create simple conditions for effective communication between a teacher and a student. Due to the rapid exchange of files, the process of distribution of tasks, announcements, course materials is accelerated, student's answers are easier to systematize, and operational information is provided regarding the assessment of works. In our opinion, the potential of this application is used in modern educational institutions only partially, although the demand for distance learning among higher education students is constantly growing [4] .

Let's take a closer look at the Google Classroom system (https://classroom.google.com/), which has become widespread due to its simplicity and accessibility to the participants of the educational process. At the end of May 2014, Google began limited testing of its educational platform "Classroom" ("Class"), designed for classroom (auditory) classes. According to Google, more than 100,000 people from 45 countries signed up to try this service in the first few months. Today, anyone with a Google account can start using it. This training system can be used both on a computer and on a tablet or smartphone.

Considering various virtual educational platforms, the Google Classroom service stands out primarily for its ease of use. It does not require special training to create a

course, and also provides users with a convenient interface to manage the educational process. Google Inc. developed this service together with teachers to help them save time, organize classes easily and quickly and communicate with students effectively. In the classroom, you can use (download) textbooks, lectures, presentations on topics, as well as video materials from YouTube [5].

Using Google Classroom, teachers can create and check assignments in electronic form easily and quickly, as well as specify due dates. At the same time, tasks and works are automatically organized into a structure of folders and documents on Google Drive, which is understandable to both teachers and students. You can immediately see the tasks that caused problems during execution [8].

Opening the tasks page, you can see what the teacher has asked the students, it is enough to click on the task to begin its execution. Information about submitted works is updated in real time, and the teacher can quickly check all works, give marks and add comments.

4.6.1. Features of the "Google Classroom system":

- using only Google tools (Google Drive, Google Docs, Google Forms, etc.);
- a common folder "Class" is created on Google Drive and all participants of the educational process have an access to it;
- the "Class" folder is available both for an individual student and for the group as a whole.

Working with such distance learning systems as Google Classroom is extremely important for students. It allows:

- to increase the effectiveness of education and improve the quality of knowledge;
- to develop cognitive activity;
- to increase interest in the studied subject;
- to improve computer skills;
- to develop independent research skills.

Thus, we can talk about the emergence of a new concept – "computer educational materials and Internet services", which unites all electronic means of education,

implemented with the help of various software tools. The most significant capabilities of electronic learning tools for the daily practical activity of the teacher are:

• adaptation of educational material to specific learning conditions, needs and abilities of students;

• duplication and placement of materials in the Internet [32].

The advantages of using Google Classroom are:

• simple setting (the teacher has the opportunity to organize several courses at the same time, plan educational process, invite students and teachers to work);

• easy of use (students can review assignments, plan their completion dates, send completed work for review in a timely manner);

• saving time and paper (possibility to monitor execution and check tasks);

• accessibility and safety[32].

4.6.2. Benefits of using Google Classroom.

First of all, it should be noted the accessibility of use: educational institutions and non-profit organizations are given this opportunity as a basic service free of charge. Educators who have personal Google accounts can work with Class for free. If there is an Internet connection, the application can be used on a computer in any browser: for example, Chrome, Firefox, Internet Explorer or Safari. What's more, Google Classroom supports new versions of major browsers - as they are updated. There are no problems with access from mobile devices based on Android and Apple iOS, which is especially convenient for most students who actively use smartphones. The service is secure, ad-free, and students' materials and information are not used for advertising purposes. You can use the latest videos from YouTube, Google Forms, PDF files or any other objects in the work with the application.

Secondly, the service is quite variable - accordingly, it can be used both fully and partially.You can pos t materials, give assignments or use it only for students' feedback and consultation. However, in any case, you need to start working with Google Classroom by creating and configuring a course. After activating the "create a course" function, the teacher must define and enter the basic settings: - name of the course; –

course description; - audience, etc. Each course at this stage is given a unique code that students can use to find and access it. The next step is to configure the opportunities that the teacher provides to students. Depending on the form of student activity provided by the teacher in this course, students can be given the opportunity to publish posts, post comments, etc. Everyone who joined the course is displayed in the student list. However, there is a certain drawback here: it consists in the fact that students do not always use real names and surnames for registration, they use nicknames. This sometimes makes it difficult to find an individual student on the list. This shortcoming can be easily corrected thanks to the formation of a culture of business communication in students, in which the use of fictitious names is inappropriate. In the displayed list of students, you can separately highlight those who can be ignored for today (for example, part-time students who are given the opportunity to use course materials for full-time education for a certain time). After the end of the semester, you can remove the list of students and create a new one, while the content of the course remains [32].

Revealing the main opportunities provided by Google Classroom for the educational process, the possibility of shared access by teachers should be highlighted separately. This is especially important for large educational institutions with a significant number of students, where some disciplines are taught together by several teachers. In addition, a modular form of education has become widespread, when students receive information from a certain discipline in thematic modules, which are also often taught by different teachers. Thanks to the Google Classroom application, all teachers who have received an invitation have the opportunity to track incoming assignments, enter results and marks, comment and respond to student comments, or view posted materials. Using the application makes individual work with students more convenient, allows you to send work options and individual tasks. It is convenient to use when working with students who study according to an individual schedule: they can receive separate tasks and materials. An interesting point in the section of tasks for students is the possibility of creating a task in the form of a test that the student fills out online. The main thing is, while completing the test, it is impossible to log out and then log in again, which makes it impossible to cheat by using the phone [32].

4.6.3. Disadvantages of Google Classroom:

• the system interface is not intuitive;

• the link (URL) to a specific class is too long and therefore not very convenient.

Let's consider the use of Google Classroom in the educational process at a university, in particular at NTUU "Ihor Sikorsky Kyiv Polytechnic Institute". Course "Practical course of an English for ESP. Part 2" is taught to fourth-year students pursuing a higher education majoring in "Applied Mechanics". The course is hosted on the Sikorsky platform.

Example of a task with a link to a video. Task: Watch the video. Prepare answers to the questions. This makes it possible to visualize certain material, the student processes not only the content, as when working with the text, he can analyze non-verbal, informational context, emotional presentation and perception of information. Thanks to Google Classroom, it is easier to check the completion of the assignment. The teacher sees the statistics immediately: who coped with the task, who contributed on time or late. The question of whether to get acquainted with the material becomes the choice of the student, and the teacher is deprived of students' refusals such as: "I didn't know, I didn't find it" etc. Students can review tasks and materials several times, ask questions that arose during the review, or about the task.

An important point on which we would like to emphasize is the systematization requirements. If you start working with the application, you can place materials by topics, blocks, modules. However, it will not suit teachers whose courses are somewhat chaotic, only partially structured, full of creative improvisations. Experience has proven that, even in the case of constant updates, insufficiently structured information in Google Classroom only overloads students and does not have the proper educational effect. The described experience of approbation of the proposed methodical development proves that the Google Classroom service allows you to use relevant video materials in the educational process by placing tasks together with a link to the video. (For example, a demonstration of a new type of transport or the use of recycled plastic for the production of asphalt, etc.) This contributes to the visualization and individualization of the learning process. Communication becomes more productive,

because students can view topic materials, video and photo materials even before meeting with the teacher at the lecture. This method makes learning more productive, allows you to conveniently place, evaluate tasks, comment on them, and return works for revision. Conveniently, Classroom is integrated with other Google tools, such as Docs or Drive.

It is clear that the mentioned method saves the time of both the student and the teacher, and, in addition, a lot of such an important resource as paper. Finally, we note that thanks to the service, it is easy to provide feedback to students. This is especially important for interfaculty elective courses. The joint work of scientific and pedagogical workers who teach one discipline together is successfully organized. However, the proposed type of work requires constant updating of the course content, materials, encourages creativity, excludes the intervention of other persons who may exercise excessive control [32].

4.7. Main benefits and drawbacks of Google Classrom tools in teaching foreign languages

It is possible to outline the *main benefits* of utilizing this platform for foreign language instruction and add a few more suggestions.

- The platform provides easy organization and access. Students can easily access materials and resources using Google Classroom, which enables teachers to easily organize their materials and resources. Teachers of foreign languages who frequently require their students to practice and learn outside of the classroom will find this feature to be especially helpful.

- Google Classroom offers a variety of interactive features that make learning a foreign language more interesting and interactive. To help students practice their language skills in a more interactive and immersive manner, teachers can design tests, games, and other activities.

- Collaboration and communication are made possible by Google Classroom, which enables real-time communication and collaboration between teachers and

students. It promotes a sense of community and engagement for students when they can ask questions, receive feedback, and work together on assignments.

- It supports personalized learning. Google Classroom gives teachers the ability to customize each student's learning environment. Every student is given a challenge and is kept interested in the variety of assignments and resources that teachers can create for different proficiency levels.

- Google Classroom enables teachers to promptly offer feedback on homework assignments and quizzes. Teachers of foreign languages who need to give their students immediate feedback to help them develop their language skills will find this feature to be especially helpful.

- Integration with Other Tools: Google Drive, Google Docs, and Google Slides are all seamlessly integrated with Google Classroom. The sharing and collaboration of materials and assignments with students are made simple for teachers thanks to this integration.

- It gives the ability to monitor student performance. Google Classroom enables teachers to keep tabs on their students' development and performance on tests and assignments.

Although Google Classroom has some advantages for teaching foreign languages, teachers should be aware of some *drawbacks* as well:

- Limited language support. Although Google Classroom supports several different languages, not all of the languages may have access to all of the features.

- Limited multimedia capabilities. Compared to other platforms, Google Classroom has fewer multimedia capabilities, which may make it challenging to design engaging and interactive language lessons.

- Difficulty with pronunciation practice. Google Classroom may not be the best option for teaching pronunciation and other oral skills because it is primarily a text-based platform.

- Insufficient personal interaction. Even though Google Classroom does include interactive tools like chat and video conferencing, it might not offer as much

face-to-face interaction and feedback as a traditional classroom setting.

- Potential distractions. Because Google Classroom is an online platform, students may be more prone to online distractions like social media and other websites, which can impair their ability to learn.

- Limited collaboration tools. Although Google Classroom does permit some student collaboration, it might not offer as many collaborative tools as other platforms, which could restrict group projects and activities.

Overall, Google Classroom can be an effective tool for teaching foreign languages, but it may not be the best option for all teachers and students [33] .

4.8. The use of social networks during the implementation of non-formal education.

According to a study by Lifesight marketers, 216.4 billion people visited the Facebook platform in 2023. YouTube – 1.35 trillion. Thus, everyone has a social profile no matter what network he uses. 59.10% "sit" in social networks from mobile devices. What does this mean? They (the networks) are with us everywhere and always – when we eat, stand in queue for coffee, travel in train or wait at the doctor's office. Social networks can be turned into useful tools for learning a foreign language.

Among the main modern approaches to the use of social networks in the learning process, we have identified the following:

- **English-speaking Direct**

It is a practical tool for developing writing, speaking and listening skills. Communication in private messages could be done via text, audio or video. If, despite a high level of grammar, you "I want to drink" instead of "I'm thirsty" every time you need to speak English, rather look for English-speaking interlocutors for communication in Direct.

- **Commenting**

Writing comments in reply to messages is also the best way to improve reading and writing skills. Moreover, it allows you to practice the vocabulary you have already learned and significantly expand it! Opponents are sometimes very eloquent – this encourages you to search for precise lexemes for worthy answers.

• **Content**

English-speaking content consumption should become a priority. We are not only talking about profile pages and communities of students or teachers - any English-language lifestyle blog can be an excellent resource. As for content creation, you should also try to do this in English. Firstly, it is interesting, and secondly, it is very effective in overcoming the language barrier. In addition to the positive impact on the development of speech skills, the creation of English-language content contributes to the development of creativity and creative thinking.

The organization of the educational process with the use of distance learning in the professional training of a higher education student encourages us to implement non-formal education. One of the main types of which is online education, which is carried out through distance learning technologies, modern information and communication technologies and social networks as an innovative element in the education system. This alternative form of organization of the individual educational trajectory of a university student has been used in the educational process of Ukraine not so long ago, and has already acquired educational significance. Accordingly, in today's conditions, in order to solve the tasks of higher education institutions, there is a need to apply online learning through the Internet, where various academies, online courses, educational and information environments, etc. have been created. It, in turn, gives the participants of the educational process the opportunity to acquire knowledge, generalize, store it and successfully use it in their future professional activity [15] .

Distance learning makes it possible to implement interactive technologies for teaching material, to obtain a full-range higher education or improve qualifications. It has such advantages as asynchrony, effective information access, flexibility, relevance, convenience, modularity, economic efficiency, interactivity, technology, updating the role of the teacher, increasing motivation and self-organization of students, reduction

of social distance, as well as the absence of geographical boundaries for obtaining education, etc.[16] .

The active function of social networks is groups of professional direction, which are united according to common interests. Social networks in education are an additional opportunity to organize independent work of students outside the classroom and acquire the ability to solve complex specialized tasks in future professional activity [17].

4.9. Instagram - a social network as a tool for teaching foreign languages at the university.

Online social networking platforms, which are usually used to communicate, share information, namely video, audio or photos, are mostly used by young people. They spend most of their free time on social networks. Social networking platforms are growing rapidly, and the possible ways of communicating information are also improving. When using the modern method of teaching foreign languages, Instagram mainly performs two functions: an educational platform and a learning tool [7].

Instagram as a social network platform provides a positive effect in the teaching and practice of foreign language learning. It helps the teacher to engage students in language learning both in the classroom and outside of it. In addition, when using Instagram, practical work can be organized individually, in pairs and in small groups. The teacher can create a profile for a specific learning group, depending on the level of their knowledge, and add content by topic - vocabulary, idioms, tables with rules, photos and tasks to them. For example, a teacher's blog serves as a learning reference point, where notes, examples, etc. are posted, the commenting function implements academic online communication, and the learning technology itself includes classroom work and an online phase.

The Instagram social network offers the following functions that can be used for educational purposes: the ability to post photos in real time and shoot short videos

using the story function; make captions for images, conduct live broadcasts; follow the life and news of interesting people; communicate through personal messages in direct mail and comment on publications; conduct polls, quizzes, polls, as well as ask and answer questions [3].

It should be noted that when using a social network, the traditional role of the teacher changes - he becomes primarily a coordinator of the educational process. The use of Instagram in addition to traditional classroom learning is in line with the current trend. Students prefer interesting forms of learning, and Instagram helps make the learning process unique. Teachers who use social networks in their practice provide their students with wider opportunities for independent and collaborative learning. The implementation of such advanced technology creates more flexible learning spaces, making learning more distributed, erasing the boundaries between online and offline teaching and learning practice [21].

Instagram can be a practical tool when learning foreign languages, as well as motivating students to master reading, speaking, listening and writing in a more informal manner. It is necessary to single out a number of didactic tasks that the Instagram social network allows you to solve in the learning process: activate the mental abilities of students, involve passive students in their work, make classes more visual, provide the educational process with new, previously unavailable materials, authentic texts, teach students to work independently with materials, provide instant feedback, increase the intensity of the educational process, provide live communication with representatives of other countries and cultures, form the skills and abilities of effective reading, writing and listening, monologic and dialogic speech, expand vocabulary, implement personally oriented and differentiated approach to learning [3].

Listening. The teacher publishes a video, which can be a short song, an excerpt from a movie or a short conversation. Students are asked to watch a video and answer questions based on the passage. When students develop their listening skills via Instagram, they also improve their pronunciation because they are exposed to the correct pronunciation. The development of listening skills through Instagram is also related to the expansion of students' vocabulary.

Speaking. Speaking is an important part of mastering a foreign language, which is given special attention in the learning process. Using a social network to teach speaking provides real language interaction, helps to develop speaking practice in certain contexts, and to become aware of the language through observation and experience, which is an aspect of language acquisition that is often neglected in textbooks [9]. As a rule, when performing speaking exercises in class, students have some problems: they are afraid to make mistakes in their speech, they do not have enough words to express their thoughts, so they do not feel comfortable. To overcome this problem, the teacher must look for effective teaching tools. For example, to integrate the social network Instagram in teaching speaking. Instagram as a resource for learning a foreign language improves listening comprehension and motivates students by introducing them to cultural and cross-cultural features.

Writing. Instagram is one of the social networks that can be integrated into the teaching of writing. The tool provides students with a new learning environment, authentic visual text and audio resources. The integration of Instagram into teaching writing can give students a new experience, as students have the opportunity to describe photos, comment on posts, and directly exchange messages [18]. Instagram has a limit of 2,200 characters, which encourages users to write voluminous texts. In addition, Instagram has certain features that allow students to discuss their work through feedback messages. This way, teachers can leave feedback after students upload their work. Another advantage of using Instagram to teach writing is to give students the opportunity to choose their own learning style. As a result, the development of writing skills is not separated from the context of the real world outside classroom practical classes.

Reading. While improving reading skills, teachers should follow certain stages of working with the text. The pre-text and text stages are conveniently conducted in the format of stories, questions to the text at the text stage - in the comments under the teacher's publication. At the post-text stage, students can create their personal post or respond in the comments. The pre-text or text stage can be worked out in a practical session, and the post-text stage can be completed independently. Instagram has a lot of

useful and interesting material for developing reading skills. One of the first educational Instagram accounts belonged to National Geographic magazine. This account posts on a variety of topics, including nature, animals, and different cultures[14].

As an extracurricular work in the Instagram social network you can find accounts that will easily explain grammar and improve vocabulary. Photos and graphic materials will help you remember information faster, and videos will teach you to perceive the language by ear and form the correct pronunciation. We will give an example of accounts that will be useful in learning English. Dictionarycom is a page where new words with transcription and explanation appear every day. English_with_nab is a mix of funny pictures, grammar, new words and popular expressions in English. The perfect account for learning English for every day - English_around - the account. It will be interesting for those who want to practice grammar and vocabulary constantly. Pronunciation_with_emma - this account has many interesting videos where the girl explains and pronounces difficult words. It is a great way to brush up your pronunciation skills and expand your vocabulary [3].

4.10. Exploring the impacts and techniques of teaching with artificial intelligence tools in non-formal\formal education.

In the modern world, technologies are developing rapidly, which leads to the emergence of various learning tools. In recent years, artificial intelligence (AI) has become popular due to its ability to perform very complex assignmnets, such as analysing information, complex calculation, proving mathematical tasks, solving problems and describing the results of research. Some programs have reached the level of human knowledge in various fields, such as medicine, computer search systems and text analysis. The integration of artificial intelligence technologies in the global process, especially language learning, is becoming more and more relevant due to the insufficient effectiveness of traditional teaching methods [34].

The integration of smart classroom teaching and artificial intelligence (AI) technology is proposed to enhance language learning experiences. Traditional teaching methods have been found to be less effective in achieving desired learning outcomes, necessitating innovative approaches. Researchers study the most influential applications and programs that contribute to the development of teaching English electronically and their effectiveness in developing e-learning will be reviewed and concluded that there are applications of artificial intelligence in teaching English, which are of great importance and a great future in the developing of language teaching[22].

In recent years, artificial intelligence (AI) technologies have rapidly entered the educational and scientific space, transforming the economy and society, and symbolizing a new stage not only in the history of digital technologies, but also in the global scale of the development of modern civilization as a whole. AI is defined as a strategic technology that provides many benefits for citizens and society as a whole,

In the modern educational environment, AI technologies play a key role in increasing the efficiency of the educational process and the professional development of teachers. The integration of AI into educational practice contributes to the personalization of learning, the automation of routine tasks and the provision of individual feedback.

Artificial intelligence industry is a field of activity in the field of information technology that ensures the creation, implementation and use of artificial intelligence technologies. Ways and methods of solving problems according to the main directions of national policy in the field of higher education: creation of specialized educational programs on artificial intelligence in the direction of "information technologies" and including of artificial intelligence topics in other educational programs; creation of interdisciplinary programs, including joint programs, master's and doctoral programs with various disciplines; involvement of different type of specialists in the formation of qualification requirements for specialists in artificial intelligence, development and implementation of educational programs, certification of applicants of higher educational institutions; integration of advanced online AI courses into curriculum;

organization and provision of internships for IT teachers in IT companies as well as state institutions that develop and apply artificial intelligence technologies; creation of international cooperation programs in the field of artificial intelligence, including cooperation with foreign partners . Currently, universities and institutes create their own provisions and concepts that determine the procedure for using artificial intelligence in the educational process. National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute has developed regulations on the use of artificial intelligence for academic activities. The university recognizes such methods of using AI models as academically dishonest, which violate the principles of integrity and ethics, research [34].

National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute has developed regulations on the use of artificial intelligence for academic activities [22]. The university recognizes such methods of using AI models as academically dishonest, which violate the principles of integrity and ethics, research. Among the main provisions are the following: - Publishing AI-generated text or AI-paraphrased content from other sources as your own work. The use of AI for automatic text generation or paraphrasing of existing content belongs without indicating the source, violates the principles of authorship and is confirmed by plagiarism. - AI reworking of the author's own article with an order to republish it as a new article. Using AI to transform an author's already published work for the purpose of creating a new publication violates the University's Honor Code and selfidentification in scholarly work.

Creating false data and presenting it as proof of research ownership (data fabrication). The generation of false data by AI and its use as a basis for scientific conclusions is a serious violation of academic integrity and can cause negative consequences for the quality of research and the reputation of the researcher.

Artificial intelligence has significant potential and can be applied in various areas of academic activity of teachers, students, postgraduates, scientists to facilitate learning, teaching and research, for example, for :

- personalized learning, when machine learning algorithms are used to create

individualized learning programs that take into account the needs and level of knowledge of each student or provide their needs for additional support;

- automating the process of task evaluation, reporting and analysis of educational achievements;

- development of virtual assistants for training (chat-bots) that can answer questions, provide support and help in solving tasks;

- creation of immersive educational environments that facilitate understanding of complex concepts;

- gamification of the educational process;

- automation of research processes, when AI tools help analyze large volumes of information, helping to identify new trends that may go unnoticed with traditional methods, which greatly facilitates research;

- development of new hypotheses;

- presentations of research results, as text generation algorithms can help scientists organize and annotate scientific articles and reports [23].

Different types of tasks can be created using artificial intelligence tools. - Utilize cutting-edge tools like ChatGPT to simulate practical conversations, providing students with valuable opportunities for interactive English language practice. - Develop students' speaking skills using artificial intelligence. In English lessons, you can be given the task of discussing certain issues with artificial intelligence. There are some helpful resources, some of which are completely free. (https://demo.hume.ai/)

- Utilize GPT models such as Grammarly for instant and accurate grammar feedback, helping students refine their grammar and overall writing skills.

- Enhance students' vocabulary using GPT tools like Scholar, which offers synonyms, antonyms, and contextually relevant word suggestions. Implement educational platforms like Knewton that integrate GPT models to analyze individual learning patterns and provide personalized English language learning paths.

- Explore GPT-driven platforms like Babbel to gain insights into social context and informal expressions, improving language learning experiences. Engage

students with interactive lessons on platforms like Duolingo, which incorporate GPT models to create dynamic and responsive English language learning experiences.

- Use artificial intelligence to create illustrative material that will help diversify the educational process.

- Utilize GPT tools with speech recognition, such as Google Cloud Speech-to-Text, to assess pronunciation and provide valuable feedback on spoken English. Enhance comprehension with GPT tools like DeepL that offer real-time translation, facilitating understanding and overcoming language barriers for English language learners [34].

Conclusion

On the basis of the conducted research, it has been proven that non-formal education cannot be considered as an alternative to formal education, it is its addition, a continuation of existing formal educational systems and is aimed at satisfying human needs for self-development, self-improvement, and self-realization of personal and professional potential. The form of meeting needs of non-formal education through providers of educational services, which simplify the search and expand the directions of self-improvement and professional growth of the individual, is gaining more and more popularity.

In addition, after carrying out a theoretical analysis of literary sources on the studied issue, we proved that among such non-traditional forms of distance learning as social networks, higher education students have the opportunity to find relevant information to expand professional competences in the field of occupational health and safety. Summarizing the above, we should note that it is advisable for the participants of the educational process to use social networks as a tool of informal education for personal needs, to find motivation and inspiration in order to expand the possibility of self-development, self-realization and gain new knowledge and practical experience.

Thus, the conducted research confirmed the relevance of non-formal education for students of a technical university, because it allows to increase the level of professional competence due to greater specification of the professional training process in accordance with the needs and interests of large companies.

Moreover, we can say that in the modern educational space there are three models of education: formal, informal and non-formal education. Non-formal education includes: training programs, courses, seminars, circles, lectures organized and conducted outside the traditional education system. From the point of view of the prospects for the development of non-formal education, it is possible to outline the task of further integration into the curricula of formal education of this type of education as an innovative component of training in a technical university.

In the course of the study, the characteristics of the Google Classroom system were revealed. It can be noted that the service is easy to use, free and has a high level of accessibility of Google Classroom and other Google services, which the digital giant Google is constantly updating and improving. It should also be emphasized that Google classroom provides an opportunity to individualize the educational process, simplifying the work, while at the same time increasing the number of individual and group methods and forms of education. The use of Classroom helps to increase the motivation to study, allows you to save time preparing for study; clarity and interactivity of information with such an organization contributes to better assimilation of information.

In addition, the social network Instagram fully corresponds to the priority areas of development of the necessary skills of authentic communication and language learning among students. Instagram is a means of community building and two-way communication. Instagram is useful as an educational tool that changes the learning environment because it provides students and teachers with an easy and enjoyable way to communicate in and out of the classroom. In recent years, the use of artificial intelligence tools in education has increased. Artificial intelligence has many advantages for use in the educational process. As far as using artificial intelligence in pedagogy is concerned, well the advantages are numerous.

Introduction.

In contemporary society, proficiency in foreign languages is increasingly vital for future professionals. Despite this necessity, universities often allocate minimal hours for language instruction, pushing students towards independent learning. The advent of accessible and user-friendly internet technology has propelled the popularity of distance learning for foreign languages.

The benefits of distance learning encompass: the flexibility for students to select their own study times, the ability to research materials at their convenience, encouragement to foster independence and self-discipline, a high degree of convenience for those balancing family and work responsibilities, and the adaptability of the learning process, as materials can be accessed from any location and on any electronic device.

However, the real challenge lies in effectively organizing the distance learning process. As distance learning is relatively new in most Ukrainian universities, structuring and managing the educational process tests the knowledge and competence of teachers in foreign language instruction. Difficulties emerge not only in presenting the foreign language material accurately but also in assessing how thoroughly students grasp the content.

Distance learning in foreign languages is distinct due to the indirect communication between teachers and students, facilitated by computers and digital communication tools. While this method offers numerous benefits, it also presents several challenges.

[5]***Authors:*** *Lakiychuk Olia*
Number of characters: *86034*
Author's sheets: *2,15*

First, it is important to mention lack of immediate support: the absence of a physical teacher means students cannot instantly seek help or clarification on specific queries, potentially leading to misunderstandings and incomplete tasks. Direct, one-on-one interaction with teachers is crucial for resolving complex issues in learning.

Secondly, feeling of isolation, since traditional classrooms offer group interactions where students can discuss, debate, and understand the material better. Distance learning can lead to a sense of isolation, as digital communication does not fully replicate face-to-face interaction. It is essential to foster engagement through webinars, wikis, and blogs to mitigate this isolation.

Also, classroom environments inherently provide social pressure and structure, promoting discipline. While some students are self-disciplined, others may struggle without this structure. Therefore, teachers need to implement clear guidelines and consistent teaching patterns to ensure students stay on track.

Despite its challenges, distance learning is becoming integral to higher education. It allows the transmission of vast amounts of information over long distances, facilitates long-term data storage, and enables the editing and processing of information. Interactive multimedia tools and swift teacher communication enhance the learning experience, providing students access to diverse information sources.

Online resource analysis reveals that many digital tools now enable foreign language teachers to create comprehensive exercise and test systems suitable for both distance and blended learning.

Language basics in distance learning encompass programs designed to introduce and activate linguistic forms and structures. These programs include interactive exercises aimed at developing various speech skills and tests to assess language proficiency. Distance learning technologies offer numerous benefits, enhancing both flexibility and motivation by allowing students to choose their study format and pace. Personalized learning tailors education to individual needs, making it more effective, while active learning methods increase engagement and effectiveness.

Moreover, distance learning improves accessibility and cost-effectiveness, providing objective assessment methods and the freedom for students to select their

study time and place, which is particularly advantageous for students with disabilities. Additionally, it promotes intensive communication between students and teachers, among peers, and with international partners, further enriching the educational experience.

Utilizing remote interaction technologies enables varied teaching methods, combining traditional approaches with creative projects can enhance the effectiveness of distance learning. This expands the educational experience beyond physical classrooms. However, preparing distance-learning courses involves unique challenges. Teachers need a thorough understanding of course objectives, careful content design, and interaction planning. This process requires technical skills and detailed planning to avoid simply digitizing textbook content, which often results in negative experiences and reduced motivation.

5.1. Challenges and advantages of distance learning in foreign language education: a comprehensive analysis.

Currently, future specialists must have a good command of a foreign language, but the number of hours allocated to studying it at a university is very small. More and more time is devoted to student's independent work. Moreover, therefore, since the Internet has become accessible and easy to use, distance learning of foreign languages is becoming very popular.

The peculiarity of distance learning in foreign languages is, first of all, the indirect nature of communication between teacher and student, which is carried out through a computer and computer communications. But, nevertheless, like all educational models, distance learning has some inherent problems [7].

Firstly, the lack of physical support (teacher) means that the student cannot ask for help or any clarification on a particular question, or misinterpret the task and at the same time may miss completing an important task. Only working one-on-one with the teacher will help him understand the difficult moments of teaching.

Secondly, it is a feeling of isolation. When communicating in a group, students have the opportunity to discuss a lot, answer questions, defend their opinions and thereby work through the material. Therefore, socially, a student may feel isolated. For technical and psychological reasons, as well as due to its indirect nature, interpersonal telecommunication communication is not able to fully compensate for the lack of direct, live communication, therefore, during distance learning, it is important to create opportunities for interaction through webinars, wikis and blogs.

Thirdly, it is discipline. Discipline is a certain amount of social pressure and regulation that is exercised in the classroom. Some students are self-disciplined and have no problem with distance learning while others may feel a small loss. Therefore, the teacher needs to establish structures and a pattern for teaching [19].

Nevertheless, distance learning is increasingly becoming part of the life of universities and, unlike distance learning, it provides the ability to transmit information of any volume over any distance, store it in computer memory for the required time, edit it, process it, etc.

When analyzing Internet resources, it was revealed that many electronic opportunities have appeared that allow foreign language teachers to use various software to create a system of exercises and tests that can be used both in distance and blended learning. Computer programs can be divided into programs for the study of basic aspects of language (introduction and activation of linguistic forms and structures); programs for teaching various types of speech activity (exercises with interactive tasks); programs that monitor the level of speech and language skills (tests). Remote technologies have a number of advantages:

Firstly, students have the opportunity to choose the form of work and its pace, which results in increased motivation. Secondly, learning becomes more individualized, i.e. aimed at every student. Thirdly, active forms of learning can be used, thereby making learning more effective. By using forms of distance learning in foreign languages, the educational process can be made more accessible and economical, and the assessment of learning results more objective. Students have the right to choose the time and place for classes [2].

This is especially true for students with disabilities. In addition, distance learning provides the opportunity for intensive communication between students and teachers, students with each other, as well as with partners from other countries.

Using remote interaction technology, you can diversify the options for conducting classes, using not only traditional teaching methods, but also activate creative thinking using project activities. After all, by creating distance projects, we make education more open, going beyond the walls of the university or home. With all the advantages of using distance learning, when preparing a course in a distance format, some problems arise. The teacher is required to have a clear understanding of the course, its goals and objectives. The teacher must also think through the structure, content, design of the course, ways of interacting with students, and the structure of knowledge assessment [8].

The process of preparing this kind of courses requires certain technical skills and painstaking work to create a course template. Such work differs from traditional work, and if we mechanically transfer the content of a textbook or test into a distance learning form, we will usually get a negative result, and students will gain a negative experience, which will in no way contribute to their motivation to learn foreign languages. Therefore, the creation of distance courses, tests or simply assignments must be approached with great responsibility and every step must be thought through.

Thus, despite all the difficulties, distance education is becoming increasingly popular, teachers are increasingly using either its separate forms or completely switching to it as an effective, interesting and attractive way of teaching foreign languages. However, it is worth remembering that such training will be truly effective only if foreign language teachers pay special attention to developing students' abilities to creatively interact and integrate students' knowledge in their professional activities [28].

5.2. Enhancing distance education in English for non-linguistic fields: key methodological insights and solutions.

A distinctive feature of modern education is its accessibility, ensured through the use of distance learning technology in the educational process. One of the most common languages of international communication is English. Organizing distance learning of English for students of non-linguistic specialties is associated with a number of difficulties. The purpose of the given chapter is to describe methodological recommendations for organizing distance learning of English for students of non-linguistic specialties.

The potential of distance learning lies in the following characteristics of educational technology:

• flexibility (students' choice of time, pace and place of work, the ability to independently determine the intensity of training necessary to master the subject);

• adaptability (giving students the right to choose, create and implement an individual trajectory for obtaining an education or acquiring skills);

• modularity (the ability to form a curriculum from a set of independent module courses that meets individual or group needs);

• economic efficiency (relatively low cost of training, ensured by focusing on a larger number of students and more efficient use of training space and technical means);

• a new role of the teacher (the teacher acts as a coordinator of the cognitive process, he is called upon to provide advisory assistance in drawing up an individual curriculum, in the process of managing educational projects, and so on) [21].

It is believed that the organization of distance learning in English for students of non-linguistic specialties is associated with a number of difficulties. The key problem of distance learning in English is the difficulty in students understanding the phenomena of the language being studied, which is due to the discrepancy between the language system of the foreign language being studied and the system of the native language and the smaller number of hours for studying the language provided for in

the training plans for students of non-linguistic specialties. To overcome this problem, it can be suggested that teachers prepare a summary of the topic, aimed at clarifying aspects of the English language that are difficult to understand.

The second difficulty lies in the limited nature of foreign language live communication, which is especially necessary in the process of teaching language to students of non-linguistic specialties. When organizing distance learning, the teacher faces a dilemma: the need for "live" communication in the process of foreign language training and the difficulty of its implementation due to the remoteness of participants in the educational process. In order to resolve this difficulty, the students can be directed to use online systems [1].

An integral component of the educational process is the analysis of its effectiveness, which consists in diagnosing the level of language training of students. The difficulty that the teacher faces at this stage is to objectify the procedure for monitoring students' speech skills. This difficulty is dictated by the very essence of distance learning, which is based on maximum student autonomy. The intellectual resources of the educational institution as a whole and the department as a structural unit of the latter should be focused on solving the transportation of knowledge and diagnosing its quality.

It is believed that assessment of students' linguistic competence should occur only in the process of live communication. It is live communication that will allow the teacher to determine the students' level of proficiency in lexical and grammatical material, basic concepts of the course, and assess the ability to apply the acquired knowledge in practice. In addition, the final test is carried out within a strictly specified period frame and is limited in time [3].

Success in mastering a course largely depends on students' awareness of gaps in knowledge and the pursuit of these gaps replenish. To solve this problem, we provide distance learning students with a set of screening tests included in the so-called "student portfolio". By this term, the scientist understands a tool for self-assessment of a student's cognitive work, reflection of his own activities. Based on the results of passing the verification test, the student receives information about questions that

require re-study.

The distinctiveness of the subject "Foreign Language" largely stems from its focus on instructional methods rather than core scientific principles. The primary emphasis is on teaching various types of language activities—speaking, listening comprehension, reading, and writing—with a strong orientation towards communication.

As a result, the primary objective of training is to achieve proficiency in speech, communication, and the study of speech-thinking activities. The communicative approach encompasses not only speaking but also integrated training in all forms of oral (speaking and listening comprehension) and written (reading and writing) communication. It emphasizes the situational presentation of language material and adapts to individual learning styles, pace, and character.

When adapting the English language distance learning system for international students, it is essential to clarify several factors. Firstly, it is crucial to define the specific objectives of their English language acquisition and the communicative contexts in which the language is intended to be utilized [22].

Secondly, it is important to consider the national and cultural characteristics of the students, including their cultural backgrounds, when designing educational tasks. This understanding can guide the development of content that is relevant and engaging. To enhance mutual understanding, tasks can be designed not only around vocabulary pertinent to the specialty but also on linguistic and cultural themes.

Thirdly, it is essential to consider the psychological aspects of student motivation. Remote e-learning is characterized by the distinct psychological dynamics of interaction between participants. Additionally, discrepancies in situational perception between teachers and students can significantly complicate the educational process. Some students are driven by extrinsic motivations, such as seeking approval from family and society, while others are motivated by an intrinsic interest in learning a foreign language, recognizing its pragmatic value [5].

5.3. Innovative methods in English teaching to non-linguistic students.

Today, the swift advancement of innovative technologies is transforming all sectors of society. In higher education, this rapid change has created a pressing need for new and improved methods and approaches to teaching foreign languages. Traditional teaching methods are increasingly supplemented and even replaced by cutting-edge technologies, which enhance the learning experience and facilitate higher levels of language proficiency.

The implementation of these new technologies in foreign language education has proven to be highly effective. Digital tools such as interactive software, online platforms, and virtual classrooms allow for a more engaging and personalized learning experience. These innovations enable students to practice language skills in a variety of contexts, receive immediate feedback, and access a wealth of resources that were previously unavailable [16].

Furthermore, the integration of multimedia elements such as videos, audio recordings, and interactive exercises caters to different learning styles and helps maintain students' interest and motivation. These tools also allow for more flexible learning, enabling students to study at their own pace and on their own schedule, which is particularly beneficial for those with diverse needs and commitments.

In addition to enhancing individual learning experiences, new technologies foster collaborative learning environments. Online discussion forums, group projects, and virtual language exchanges connect students from different backgrounds and locations, promoting cultural exchange and practical language use. These collaborative opportunities not only improve language skills but also prepare students for global communication in their professional and personal lives.

Overall, the integration of innovative technologies in foreign language teaching is leading to significantly higher rates of language mastery. As these technologies continue to evolve, they hold the potential to further revolutionize language education, making it more accessible, effective, and engaging for learners around the world.

Currently, the field of foreign language education is undergoing a significant

transformation. Traditional methods such as the grammar-translation method, structural approach, and communicative language teaching are now being complemented and enhanced by a variety of innovative teaching techniques. These new methods leverage technology and modern pedagogical theories to create a more dynamic and effective learning environment [25].

One of the most notable changes is the shift in the roles and priorities of both students and teachers. In the past, the teacher was seen as the central figure in the classroom, responsible for delivering knowledge and guiding the learning process. The student, on the other hand, was often considered a passive recipient of this knowledge. Today, this dynamic has changed dramatically. The student is now viewed as an active participant in their own learning journey, rather than merely the "object" of educational influences.

This shift places the cognitive activity of the student at the forefront of the educational process. The focus is on fostering students' ability to think critically, solve problems, and apply their language skills in real-world contexts. This approach encourages students to take more responsibility for their own learning, promoting greater engagement and motivation [18].

Innovative teaching methods that support this shift include project-based learning, flipped classrooms, and the use of digital tools and resources. Project-based learning allows students to work on real-life projects that require the use of foreign language skills, thereby making learning more relevant and practical. Flipped classrooms invert the traditional teaching model by delivering instructional content online outside of the classroom and using class time for interactive, hands-on activities.

Digital tools and resources play a crucial role in modern language education. Online platforms, language learning apps, and virtual reality environments provide students with opportunities to practice their language skills in immersive and interactive settings. These technologies also offer personalized learning experiences, adapting to the individual needs and progress of each student.

Additionally, social media and communication platforms enable students to connect with native speakers and other learners around the world, facilitating authentic

language practice and cultural exchange. These interactions help students develop not only their language proficiency but also their intercultural competence, which is increasingly important in our globalized world [6].

The role of the teacher has also evolved in this new educational landscape. Teachers are now seen more as facilitators or guides who support and mentor students rather than simply transmitters of knowledge. They help students navigate through the wealth of available resources, provide feedback and guidance, and create a supportive learning environment that encourages experimentation and growth.

This new approach to language teaching aligns with contemporary educational theories that emphasize active learning, student autonomy, and the importance of real-world application. It recognizes that effective language learning is not just about memorizing vocabulary and grammar rules, but about developing the ability to communicate effectively and confidently in a foreign language.

Overall, the integration of innovative teaching methods and technologies in foreign language education is leading to more engaged and capable learners. By prioritizing the cognitive activity of students and supporting them with modern tools and strategies, educators can create a more effective and enjoyable language learning experience. As these methods continue to evolve, they promise to further enhance the way languages are taught and learned, preparing students to thrive in an increasingly interconnected world [13].

Modern innovative methods in teaching foreign languages have revolutionized the educational landscape, offering a diverse range of approaches that cater to the needs of 21st-century learners. These methods include the project-based approach, which often leverages Internet projects to provide students with real-world contexts and collaborative opportunities that enhance language acquisition. Additionally, the case method has gained popularity, engaging students in the analysis and discussion of real-life scenarios, thereby improving their critical thinking and problem-solving skills in the target language.

STL (Structured Team Learning) learning in collaboration is another innovative approach that emphasizes cooperative learning, where students work in teams to

achieve common goals, fostering both language skills and interpersonal communication. Brainstorming sessions, which encourage creative thinking and the rapid generation of ideas, are also increasingly used to help students express themselves more freely and confidently in a foreign language [30].

Problem-based learning (PBL) is a student-centered pedagogy that challenges learners to solve complex problems, often without a predefined solution, encouraging deep engagement with the language as a tool for inquiry and discovery. Moreover, the integration of technology in language teaching is evident in the widespread use of computer presentations, which not only aid in the visualization of complex concepts but also allow for interactive and multimedia-rich learning experiences.

These innovative methods represent a shift from traditional language teaching, focusing more on active participation, real-world relevance, and the development of critical 21st-century skills alongside language proficiency. They reflect an understanding that language learning is most effective when students are actively engaged, challenged, and supported by technology and collaborative frameworks [15].

The Internet has become an invaluable resource for accessing a vast array of authentic materials on professionally oriented topics, greatly enriching the landscape of foreign language education. These materials, which range from industry-specific articles and reports to multimedia content and online forums, offer learners the opportunity to engage with real-world language use in contexts directly relevant to their professional fields. This access to authentic content not only enhances language proficiency but also provides learners with insights into the latest trends, practices, and terminologies used in their respective industries [11].

In today's digital age, the widespread availability of the Internet, which is accessible to the majority of students, has paved the way for the integration of modern technologies into the process of learning foreign languages. This has led to the development of new and innovative forms of language instruction that are more interactive, engaging, and tailored to the needs of contemporary learners. For instance, online platforms and apps enable students to practice their language skills in real-time, connect with native speakers around the world, and receive instant feedback, thus

creating a more dynamic and immersive learning experience.

Furthermore, the Internet has facilitated the emergence of new forms of language learning that extend beyond traditional classroom settings. E-learning courses, webinars, and virtual language exchanges are just a few examples of how technology is being leveraged to provide flexible, accessible, and personalized language education. These platforms often include a variety of interactive elements, such as quizzes, games, and discussion boards, which help to maintain student engagement and motivation [20].

In addition to transforming the way languages are taught, the Internet has also introduced new methods of knowledge assessment and control. Online testing tools, for example, allow for more frequent and varied forms of assessment, enabling educators to monitor student progress more effectively and provide targeted support where needed. These tools often include features such as adaptive testing, which adjusts the difficulty level of questions based on the learner's performance, and instant feedback, which helps students to identify and address their weaknesses in real-time.

Overall, the Internet has significantly expanded the possibilities for language learning, making it more flexible, accessible, and relevant to the needs of today's learners. As new technologies continue to emerge, the potential for further innovation in this field is immense, promising even more effective and engaging ways to learn and teach foreign languages in the future [26].

Modern mobile technology, encompassing devices such as mobile phones, tablets, MP3/4 players, iPads, and other portable gadgets, has revolutionized the way we approach language learning. These devices enable learners to engage with all aspects of a language—reading, speaking, listening, and writing—whenever and wherever they choose, whether in the classroom or beyond. The portability and versatility of these technologies mean that language learning is no longer confined to a specific time or place; instead, it becomes an ongoing process integrated into the daily lives of students.

With the advent of mobile apps and online platforms designed specifically for language education, students now have access to a plethora of resources at their

fingertips. They can read foreign language texts, listen to native speakers, practice pronunciation through speech recognition software, and write essays or responses that are immediately analyzed by AI-driven tools. This constant availability of language learning opportunities ensures that students can practice and refine their skills on the go, turning even the smallest moments of free time into productive learning experiences [17].

Moreover, modern technologies do more than just facilitate the practical use of a foreign language; they also foster important professional behaviors among students. By encouraging independence, these tools empower learners to take control of their own education, seeking out resources and practicing skills autonomously. The interactive nature of many language learning apps and platforms also stimulates student activity, requiring active participation rather than passive consumption of information. This active engagement is crucial for language acquisition, as it helps to solidify knowledge and improve retention.

Creativity is another key trait nurtured by modern mobile technologies. Many apps and platforms offer creative exercises, such as story-building games, role-playing scenarios, and collaborative projects with peers from around the world. These activities not only enhance language skills but also encourage students to think outside the box and approach problems from different angles, reflecting the innovative thinking required in professional environments [10].

In essence, modern mobile technology has transformed language learning into a dynamic, flexible, and engaging process that aligns with the demands of today's fast-paced world. By promoting not only linguistic proficiency but also critical professional behaviors like independence, activity, and creativity, these technologies are preparing students for success in both their language studies and their future careers.

The method of projects, particularly Internet-based projects, is gaining significant traction in contemporary educational settings as an innovative and effective approach to language learning. This method emphasizes independent, interactive learning, empowering students across various proficiency levels to actively engage in the learning process and express themselves creatively and confidently. By allowing

students to work on projects that are both relevant and meaningful to them, this method fosters a deeper connection to the language, as learners are motivated to use the foreign language in authentic contexts rather than merely completing isolated exercises.

One of the key strengths of the project method is its ability to simultaneously create a rich language environment while providing practical opportunities for language use. This dual focus addresses one of the most challenging aspects of language teaching methodology: ensuring that students not only learn the mechanics of a language but also apply it in real-world situations. Through project work, students are immersed in a language environment where they must navigate a variety of linguistic and cognitive challenges, thereby enhancing their language proficiency in a holistic manner [24].

5.4 Project method as one of the most effective teaching approach during online studying.

Internet projects, in particular, offer a dynamic platform for this method, as they provide access to a wealth of resources and tools that can be tailored to the specific needs and interests of the students. These projects often involve collaborative tasks, research, content creation, and problem-solving, all of which require students to use the target language in diverse and complex ways. The Internet also opens up opportunities for cross-cultural communication, enabling students to collaborate with peers from different parts of the world, thereby broadening their cultural understanding and global perspective.

In the process of implementing various projects, students are required to solve a multitude of problems that encompass not only linguistic challenges but also critical thinking, creativity, and collaboration. For example, a student working on an Internet project might need to research information, synthesize data, communicate with team members, and present findings, all while using the foreign language. This multifaceted approach ensures that language learning is deeply integrated with other essential skills,

making it a comprehensive educational experience.

As such, working on an Internet project represents a multi-level and multi-aspect approach to language learning. It engages students on multiple fronts—cognitively, socially, and linguistically—thereby fostering a more profound and lasting mastery of the language. This method not only equips students with the necessary language skills but also prepares them to tackle complex tasks in real-life situations, making it a valuable tool in modern language education [4].

In conclusion, the project method, especially when implemented through Internet-based platforms, is an increasingly popular and effective strategy for language learning. It bridges the gap between theoretical knowledge and practical application, creating a dynamic and interactive learning environment that challenges students to use the foreign language in meaningful and authentic contexts. By promoting independence, creativity, and problem-solving skills, this method not only enhances language proficiency but also prepares students for the complexities of real-world communication.

Project work in the context of language learning must adhere to a set of well-defined criteria to ensure that it is both effective and meaningful. These criteria are designed to maximize the educational value of the project, guiding students through a structured yet flexible learning process that promotes language proficiency, critical thinking, and social development. Below are the key criteria that project work should meet to achieve these goals:

- Professional and Practical Orientation:

A successful project must have a clear professional and practical orientation, meaning that the work should be relevant to real-world applications, particularly in the students' future professional fields. This ensures that the project is not just an academic exercise but also a valuable preparation for the professional tasks students will encounter in their careers. By engaging in projects that mirror actual workplace scenarios, students can better understand the practical uses of the foreign language they are learning. This orientation helps bridge the gap between theoretical knowledge and its application, making the learning experience more relevant and engaging.

- Clear Objectives:

Every project must have a specific, well-defined goal that guides the entire process. This goal typically involves the practical use of a foreign language in both oral and written forms, ensuring that students develop comprehensive language skills across all types of speech activity, including reading, writing, listening, and speaking. The clarity of the project's objective helps students focus their efforts, understand the purpose of their work, and measure their progress effectively. It also allows educators to design assessments and feedback that are aligned with the intended learning outcomes, making the project an integral part of the overall language curriculum.

- Student Independence:

One of the cornerstones of effective project work is fostering students' independence. From the initial stages of selecting a project topic that genuinely interests them to planning and executing the work, students should be encouraged to take ownership of their learning process. This independence is crucial for developing self-directed learning habits, which are essential for lifelong learning. By allowing students to choose topics that resonate with their personal or professional interests, the project becomes more engaging and meaningful, increasing motivation and the likelihood of success. Furthermore, the autonomy involved in planning and executing the project helps students build confidence in their ability to manage complex tasks independently.

- Result-Oriented Approach:

The culmination of project work should be the preparation of a creative and tangible output that reflects the students' efforts and learning. This result-oriented approach ensures that the project has a clear end goal, such as a PowerPoint presentation, a research report, a video, or another appropriate form of final product. The process of creating this final output encourages students to synthesize their knowledge, apply their language skills in a coherent and polished manner, and present their work to an audience. This aspect of project work not only reinforces language learning but also develops important skills in communication, organization, and presentation, which are vital in both academic and professional settings.

- Development of Social Qualities:

Working on a joint project provides a unique opportunity for students to develop essential social qualities such as teamwork, communication, and empathy. Collaborative projects require students to interact with peers, share ideas, negotiate different perspectives, and work towards a common goal. These experiences help students build interpersonal skills that are crucial in both professional and personal contexts. Through collaboration, students learn to value the contributions of others, manage conflicts, and foster a sense of community and shared responsibility. The development of these social qualities is a significant benefit of project work, as it prepares students not only for academic success but also for effective participation in a diverse and interconnected world [9].

Effective project work in language learning must meet several key criteria to ensure that it is both educationally valuable and practically relevant. By focusing on professional and practical orientation, clear objectives, student independence, result-oriented outcomes, and the development of social qualities, project work can significantly enhance the language learning experience. It provides students with the opportunity to apply their language skills in meaningful contexts, encourages independent learning, and fosters important social and professional skills that will serve them well beyond the classroom.

Project activities in education encompass a wide array of types, including professionally oriented projects, research-based initiatives, role-playing scenarios, and creative endeavors. Each of these project types offers unique opportunities for students to engage with the material in ways that resonate with their interests and learning styles. However, regardless of the specific type of project, there are certain essential steps that must be followed to ensure the success of the project and the attainment of its educational objectives. These steps provide a structured approach that guides both teachers and students through the process of project work, from initial planning to final reflection [14].

- Planning:

The first critical step in any project is thorough planning, which sets the

foundation for the entire project. This phase is typically initiated by the teacher, who plays a key role in guiding the direction of the project. The planning stage involves selecting an appropriate topic, which should be closely aligned with the educational material and the professional interests of the students. This alignment ensures that the project is relevant and engaging for the students, increasing their motivation and involvement. During this stage, the teacher also analyzes the initial ideas and concepts that will form the basis of the project, helping to refine and focus the objectives. Effective planning requires careful consideration of the resources available, the skills of the students, and the intended learning outcomes, all of which contribute to the successful execution of the project.

- Development of the Structure and General Plan:

Once the initial planning is complete, the next step involves developing the structure and overall plan of the project. This step is crucial as it defines the main idea of the project and outlines the steps needed to achieve the final goal. Students are often involved in this process, as they contribute to defining the project's scope, collecting relevant information, and drawing up a detailed plan. This stage may include brainstorming sessions, research, and the organization of ideas into a coherent structure that guides the subsequent work. The development of a clear and well-organized plan ensures that all participants understand their roles and responsibilities, making it easier to coordinate efforts and maintain focus throughout the project. Additionally, this phase provides an opportunity to identify potential challenges and develop strategies to address them, helping to mitigate risks and ensure the project stays on track.

- Work in Groups:

Collaborative work is a hallmark of project-based learning, and the group work phase is where the bulk of the project's activities take place. During this stage, students work together to implement the plan developed in the previous step. This involves drawing up a step-by-step action plan, searching for and processing relevant materials, and making necessary corrections and adjustments as the project progresses. Group work fosters a sense of teamwork and shared responsibility, as students must communicate effectively, delegate tasks, and support one another to achieve the

project's objectives. This phase also provides valuable opportunities for students to develop critical soft skills, such as problem-solving, time management, and conflict resolution. Throughout this stage, the teacher acts as a facilitator, offering guidance and feedback to ensure that the group stays on track and that the project meets the established criteria [12].

- Project Presentation:

The culmination of the project work is the presentation phase, where students showcase the results of their collaboration in a chosen format. The presentation is a critical component of the project, as it allows students to demonstrate their understanding of the material, their ability to apply language skills, and their creativity in presenting information. Common forms of project presentation include PowerPoint slideshows, videos, posters, or even live demonstrations, depending on the nature of the project and the preferences of the group. This phase also serves as an opportunity for students to practice public speaking and presentation skills, which are essential in both academic and professional settings. The project presentation is often a moment of pride for students, as it represents the culmination of their hard work and collaboration, and it provides a tangible outcome that can be shared with peers, teachers, and potentially a wider audience.

- Reflection:

The final step in the project process is reflection, a critical phase that involves evaluating the project and the collaboration process. During this stage, students and teachers engage in a discussion about the effectiveness of the teamwork, the participation of each group member, and the overall success of the project. Reflection allows students to consider what they have learned from the experience, both in terms of content and process, and to identify areas for improvement in future projects. This stage also provides an opportunity to assess the outcomes of the project against the original goals and objectives, offering insights into what worked well and what could be refined. Through reflection, students develop a deeper understanding of their strengths and weaknesses, as well as the importance of collaboration and communication in achieving shared goals. Additionally, this phase encourages a

growth mindset, as students learn to view challenges and setbacks as opportunities for learning and development.

Despite the variety of project types available, the success of any project hinges on following a structured approach that includes planning, development of a clear structure, collaborative group work, a formal presentation of results, and thoughtful reflection. These steps ensure that the project is not only a valuable learning experience but also a process that fosters important skills such as critical thinking, collaboration, communication, and self-assessment. By adhering to these steps, teachers and students can maximize the educational impact of project work, making it a powerful tool for both language learning and personal development.

Working on a presentation is an invaluable exercise in language education, as it fosters the development of a wide array of essential skills. Among these are reading, writing, and translation skills, which are honed as students engage with texts, interpret and synthesize information, and convey their understanding through both written and spoken language. The process of creating a presentation requires students to critically analyze source materials, translate complex ideas into comprehensible formats, and articulate these ideas clearly and persuasively in the target language. This not only deepens their comprehension but also enhances their ability to communicate effectively in a foreign language.

Moreover, the creative approach inherent in the task of completing a presentation is expressed through the various forms of data presentation that students may choose to employ. Whether through the use of visuals, such as charts, graphs, and images, or through more interactive elements like videos, animations, and multimedia, students are encouraged to think innovatively about how best to convey their message. This creativity is not just about making the presentation aesthetically pleasing; it is also about finding the most effective ways to communicate complex ideas and engage the audience. As students explore different methods of presenting information, they learn to balance clarity with creativity, ensuring that their presentations are both informative and captivating. This process also enhances their technical skills, as they become more adept at using digital tools and software to create professional and polished

presentations.

In today's educational landscape, alongside traditional methods of teaching foreign languages, there is a growing emphasis on innovative methods that better cater to the needs of modern learners. One such method is project-based learning, which has become increasingly popular due to its effectiveness in developing not only linguistic skills but also social and professional competencies. Unlike traditional language instruction, which often focuses on isolated grammar exercises and vocabulary drills, project-based learning places students in real-world scenarios where they must use the language actively and meaningfully. This method challenges students to apply their language skills in context, whether they are researching a topic, collaborating with peers, or presenting their findings to an audience.

Project-based learning is particularly beneficial in non-linguistic universities, where students are often preparing for careers in fields other than language studies. By engaging in projects that are relevant to their future professions, students develop a deeper understanding of how language functions in their specific contexts, whether in business, science, engineering, or the arts. This not only improves their language proficiency but also prepares them for the communication demands of their future careers. Additionally, the collaborative nature of many projects helps students develop crucial social skills, such as teamwork, negotiation, and cultural awareness. These skills are essential in today's globalized world, where professionals must be able to work effectively with colleagues from diverse linguistic and cultural backgrounds [23].

Furthermore, project-based learning promotes the development of professional skills that are highly valued in the workplace. As students plan, execute, and present their projects, they learn to manage their time, set goals, solve problems, and make decisions—skills that are transferable to any career. The emphasis on real-world applications also means that students are more likely to see the relevance of their language studies to their future careers, which can increase motivation and engagement. In this way, project-based learning not only enhances students' language abilities but also equips them with the social and professional skills they will need to succeed in their chosen fields [27].

In conclusion, while traditional methods of teaching foreign languages remain important, the increasing use of innovative approaches like project-based learning is transforming language education. These methods offer a more holistic approach to learning, one that integrates linguistic, social, and professional development. As such, they are particularly well-suited to the needs of students at non-linguistic universities, providing them with the tools they need to succeed both academically and professionally in an increasingly interconnected world. By combining the strengths of traditional instruction with the opportunities provided by innovative methods, educators can offer students a more comprehensive and engaging learning experience that prepares them for the challenges and opportunities of the future.

5.5 Assessment through electronic technologies: methodologies and innovations.

Monitoring the results of students' educational activities is a crucial component in the process of teaching foreign languages. It serves as a key mechanism for determining the extent to which learning objectives have been achieved and for assessing the level of linguistic and speech competence that students have attained. This stage of the educational process is not merely about recording grades or outcomes; it plays a pivotal role in guiding both instruction and learning. By systematically evaluating students' progress, educators can identify areas where students excel and where they may need additional support, allowing for a more personalized and effective teaching approach [5].

5.5.1. The role of electronic testing in monitoring and enhancing language learning outcomes

The development of an objective and reliable control system for monitoring student progress is, therefore, one of the most important directions in the methodology of teaching foreign languages. An objective control system ensures that assessments are fair, consistent, and reflective of students' actual abilities. It provides educators with

accurate data that can be used to refine instructional strategies, tailor learning experiences to individual needs, and ultimately improve educational outcomes. Such a system also helps in maintaining high academic standards, ensuring that students who successfully complete language courses possess the necessary skills to communicate effectively in the target language.

Within the framework of this control system, testing plays a significant role, particularly electronic testing, which has become increasingly prevalent in modern educational settings. Electronic testing refers to the use of computer-based assessments where all stages of the test, from the administration of questions to the scoring and feedback, are managed by a computer. This method of testing offers several advantages over traditional paper-based tests. It allows for the automation of test administration, which can reduce the potential for human error and increase the efficiency of the testing process. Additionally, electronic tests can provide immediate feedback to students, which is beneficial for learning as it allows students to quickly understand their mistakes and learn from them [1].

Electronic testing also offers greater flexibility in test design. Educators can create a wide variety of question types, including multiple-choice, true/false, matching, and even interactive exercises that require students to drag and drop answers or complete tasks in a simulated environment. This variety can make tests more engaging for students and can better assess a range of language skills, from vocabulary and grammar to reading comprehension and listening abilities. Furthermore, electronic tests can be adaptive, meaning that the difficulty of the test can adjust based on the student's responses, providing a more personalized assessment experience that accurately reflects the student's level of competence.

It is important to distinguish electronic testing from other forms of testing that merely use electronic means for processing results. For instance, a test that is administered on paper but later scored using electronic methods is not considered a true computer-based test. In such cases, while the scoring may be automated, the test itself does not benefit from the full range of capabilities offered by a fully electronic testing system. True electronic testing involves the integration of technology

throughout the entire testing process, from the design and delivery of the test to the analysis and reporting of results [9].

The shift toward electronic testing represents a broader trend in education toward the use of technology to enhance the learning experience. As educational institutions continue to adopt digital tools and platforms, electronic testing is likely to become even more widespread. This shift not only reflects changes in how students are assessed but also how they learn, as technology enables more interactive, engaging, and personalized learning experiences. However, the implementation of electronic testing also requires careful consideration of several factors, including the need for reliable and secure testing environments, the importance of training both educators and students in the use of testing technologies, and the need to ensure that electronic tests are accessible to all students, including those with disabilities.

In conclusion, monitoring students' progress through a robust and objective control system is an essential part of language education. The increasing role of electronic testing within this system highlights the importance of integrating technology into the assessment process. By leveraging the advantages of electronic testing, educators can provide more accurate, efficient, and meaningful assessments that support students' language learning and contribute to their overall educational success. As the use of electronic testing continues to grow, it will be important for educators to remain informed about best practices and to continuously refine their approaches to ensure that these assessments are fair, reliable, and truly reflective of students' linguistic competence [13].

Electronic testing possesses several key characteristics that distinguish it from traditional forms of assessment. These characteristics—validity, reliability, representativeness, and discriminativeness—are crucial for ensuring that electronic tests are effective and fair measures of students' abilities and knowledge. Understanding these characteristics can help educators design and implement electronic tests that provide accurate and meaningful assessments.

Validity refers to the extent to which an electronic test measures what it is intended to measure. In the context of language assessment, this means that the test

should accurately assess the specific language skills and knowledge it purports to evaluate. For example, a test designed to assess vocabulary should include questions that effectively gauge students' understanding and use of words in context. Ensuring validity involves aligning test content with learning objectives and ensuring that the test items accurately reflect the constructs being measured. Electronic testing platforms can enhance validity by allowing for a range of question types and interactive elements that more closely simulate real-world language use, providing a more accurate measure of students' language abilities.

Reliability refers to the consistency and stability of test results over time. An electronic test is considered reliable if it yields consistent results when administered to the same group of students under similar conditions. This means that if students were to take the test multiple times, their scores should be similar, assuming their knowledge and abilities have not changed. Reliability is crucial for ensuring that test results are dependable and that they accurately reflect students' true abilities. Electronic testing systems often enhance reliability through automated scoring and standardized test administration, reducing the likelihood of errors and variability that can occur with manual grading or inconsistent test delivery [27].

Representativeness involves ensuring that the test content accurately reflects the full range of material that students have been exposed to during their learning. In other words, an electronic test should cover the relevant topics and skills that have been taught, providing a comprehensive assessment of students' knowledge. This characteristic is important for ensuring that the test results are meaningful and relevant to the learning objectives. Electronic testing platforms can support representativeness by offering a variety of question types and formats that address different aspects of the curriculum, and by allowing for the inclusion of diverse content that reflects the breadth of the subject matter.

Discriminativeness refers to the ability of a test to differentiate between students of varying levels of ability. A test is considered discriminative if it can accurately distinguish between students who have a high level of proficiency and those who have a lower level of proficiency. This characteristic is important for identifying students'

strengths and areas for improvement. Electronic tests can enhance discriminativeness through adaptive testing features that adjust the difficulty of questions based on students' responses, allowing for a more precise measurement of their abilities. Additionally, electronic testing platforms can provide detailed analytics that help educators understand how different students perform on various aspects of the test, further aiding in the identification of specific learning needs [16].

Computer-based testing incorporates several distinct features that enhance the testing experience and improve the effectiveness of assessments. Key features of computer testing include the likelihood of randomization and adaptability, time management capabilities, and the presence of interactivity and multimedia. These features collectively contribute to a more dynamic, personalized, and engaging assessment process.

Randomization is a crucial feature of computer-based testing that involves arranging test items or tasks in a random order for each test taker. This process ensures that no two test-takers receive the same sequence of questions, which helps to prevent cheating and reduces the likelihood of answer memorization. Randomization enhances the fairness and security of the testing process by providing each student with a unique set of questions. This feature also helps in individualizing the testing experience when multiple students are taking the test simultaneously. By presenting questions in a varied order, randomization ensures that the assessment is more robust and that it accurately measures students' knowledge and skills without the influence of predictable patterns.

Adaptability is another significant feature of computer testing, which is facilitated by the flexibility of the testing system. Adaptive testing adjusts the difficulty level of questions based on the student's responses. If a student answers a question correctly, the system may present more challenging questions to further assess their abilities. Conversely, if a student struggles with a question or makes an error, the system can provide easier questions or offer links to supplementary theory, rules, or hints to support their learning. This adaptive approach personalizes the testing experience, allowing for a more accurate assessment of the student's true level of proficiency. It also helps to keep students engaged and motivated by providing a more tailored and

supportive testing environment [16].

Time management in computer-based testing refers to the ability to set and enforce time limits for completing the entire test or individual tasks within the test. This feature is important for simulating real-world conditions where time constraints are often a factor. By incorporating time limits, educators can assess not only students' knowledge but also their ability to manage time effectively and work efficiently under pressure. The technical capability to impose these limits ensures that tests are administered consistently and fairly, and it provides valuable data on how students handle time management challenges. Additionally, the use of timers can help students practice and develop their time management skills, which are essential for both academic and professional success.

The presence of interactivity and multimedia elements is a distinctive feature of electronic tests that significantly enhances the testing experience. Interactive elements, such as drag-and-drop tasks, clickable hotspots, and simulation exercises, make the test more engaging and allow students to interact with the content in various ways. Multimedia components, including audio clips, videos, and animations, can provide richer context and more diverse ways to assess students' understanding. For instance, language tests may include listening exercises where students must respond to audio prompts or view video clips to answer comprehension questions. These features not only make the test more stimulating but also provide a more comprehensive evaluation of students' abilities by incorporating multiple modes of input and response.

An important aspect of computer-based testing is the provision of immediate feedback. The interactive nature of electronic tests allows for real-time assessment of students' responses. Correct answers are automatically counted, grades are assigned instantly, and students are informed of their results without delay. Immediate feedback helps students understand their performance and learn from their mistakes as they progress through the test. This timely information is valuable for both students and educators, as it provides insights into areas of strength and areas needing improvement. The ability to receive feedback quickly contributes to a more effective learning process, as students can address their weaknesses and reinforce their knowledge in a timely

manner [2].

5.5.2 Principles and best practices in developing effective computer-based assessments.

When developing computer-based tests, adhering to specific guidelines and rules is crucial to ensure that the test is effective, fair, and reliable. The design and implementation of electronic tests require careful consideration to create assessments that accurately measure students' knowledge and skills while providing a clear and meaningful testing experience. The following principles should be followed during the development of electronic tests:

- Significance and Clarity of Questions:

Each question included in an electronic test should be carefully selected to cover the most important aspects of the topic being assessed. Questions must be significant in terms of their relevance to the learning objectives and should accurately reflect the key concepts that students are expected to understand. Clarity is essential for effective testing; questions should be phrased in a way that is easily understood by all students. Ambiguity in question wording can lead to confusion and misinterpretation, which can adversely affect test results. Therefore, questions should be straightforward and unambiguous, avoiding any potential for multiple interpretations. Additionally, each question should offer a sufficient number of answer options, typically ranging from four to ten choices. This range provides a balance between offering enough options to assess understanding and preventing the test from becoming overly complex or unwieldy.

- Test Length and Focus:

The length of the electronic test should be carefully managed to avoid overwhelming students. A test that is too lengthy can lead to fatigue, which may negatively impact performance and result in less accurate assessments of students' abilities. It is important to design tests that are appropriately sized for the content being assessed, ensuring that each question contributes meaningfully to the overall evaluation. Additionally, the test should remain focused on the core objectives and

avoid including extraneous material that does not directly relate to the learning goals.

- Avoiding Hints and Provocative Questions:

The wording of test tasks should be free from any hints or suggestions that could inadvertently guide students toward the correct answers. The purpose of an electronic test is to assess students' true understanding and knowledge, not to lead them to the answers through indirect cues. Provocative questions that might confuse or mislead students should be avoided, as they do not contribute to a fair assessment. Similarly, questions focusing on minor details or irrelevant minutiae are not appropriate for electronic tests, as they do not effectively measure students' overall comprehension of the subject matter.

- Interconnected Tasks and Test Integrity:

Ensuring that test tasks are interconnected helps to maintain the integrity and coherence of the test. Interconnected tasks are those that build upon each other or relate to a common theme, providing a more comprehensive assessment of students' understanding. This approach helps to create a test that is logically structured and ensures that the various components of the assessment are aligned with the learning objectives. A well-organized test with interconnected tasks can also help students navigate the test more easily and understand the relationships between different topics.

- Principle from Simple to Complex:

When compiling an electronic test, it is important to follow the principle of progressing from simple to complex. This means that the test should start with questions that assess basic understanding and gradually move towards more complex and challenging questions. This progressive approach allows students to build confidence as they proceed through the test and ensures that the assessment accurately reflects their depth of knowledge. Starting with simpler questions helps to establish a baseline of students' understanding before moving on to more advanced concepts, providing a clearer picture of their overall proficiency.

For such purposes a range of sophisticated tools and platforms to develop and administer computer-based tests can be employed. These tools and technologies are essential for creating effective assessments that support diverse learning needs and

provide valuable insights into students' language skills. Primary platforms include Moodle, Classtime, and various Web 2.0 technologies, each offering unique capabilities for test creation and management [28].

Moodle is a widely used open-source learning management system that provides robust functionalities for creating and administering online tests. Its versatile features allow educators to design a variety of test types, including multiple-choice questions, short answers, and essays. Moodle's user-friendly interface also supports the integration of multimedia elements, such as audio and video clips, which can enhance the testing experience and better assess students' language skills. Additionally, Moodle's reporting tools provide detailed analytics on student performance, helping educators to track progress and identify areas for improvement.

Classtime is another platform utilized for test development, offering tools specifically tailored for higher education institutions. This platform supports the creation of comprehensive tests that align with curriculum objectives and learning outcomes. It also facilitates the administration of tests and the collection of results, streamlining the assessment process. Classtime's features enable the incorporation of interactive elements and diverse question formats, ensuring that tests are engaging and accurately assess students' understanding of various language aspects.

Web 2.0 technologies encompass a range of online tools and applications that support collaborative and interactive learning experiences. These technologies include various programs and designers that aid in the creation of computer tests. Notable examples include:

PowerPoint Templates: These templates allow educators to design visually appealing test questions and presentations that can be used in both online and offline testing environments. PowerPoint's flexibility makes it easy to create tests that incorporate multimedia elements, enhancing the overall assessment experience.

HotPotatoes: This suite of tools is specifically designed for creating interactive web-based exercises and tests. HotPotatoes supports various question types, including multiple-choice, gap-filling, and matching exercises. Its user-friendly interface makes it accessible for educators to create tests that are both engaging and educational.

Other Online Test Creation Tools: There are numerous other online tools and platforms available that facilitate the creation of interactive and multimedia-rich tests. These tools offer various features, such as automated grading, real-time feedback, and customizable test formats, contributing to a more dynamic and effective assessment process.

In addition to the aforementioned platforms and tools, there are several websites that provide opportunities for online testing on various aspects of the English language. These sites can be utilized for both independent student work and classroom activities. They offer a range of test types and practice exercises that cover different language skills, including grammar, vocabulary, reading comprehension, and listening. By integrating these online resources into the curriculum, educators can provide students with additional practice and support, enhancing their learning experience [14].

A variety of electronic test types to assess different stages of student learning can be utilized:

Introductory tests are designed to gauge students' initial knowledge and understanding of the subject matter. They provide a baseline assessment that helps educators identify students' prior knowledge and readiness for more advanced topics.

Current or thematic tests are administered throughout the course to assess students' understanding of specific topics or themes that have been covered in recent lessons. These tests help monitor ongoing progress and ensure that students are keeping up with the curriculum.

Training tests are used as practice exercises to help students prepare for more formal assessments. They provide opportunities for students to apply their knowledge and skills in a low-stakes environment, receive feedback, and improve their performance before taking final exams.

Final tests are comprehensive assessments administered at the end of the course to evaluate students' overall understanding and mastery of the material. These tests are critical for determining final grades and assessing whether students have achieved the learning objectives of the course.

Tests can be categorized into two main types: closed and open. Each type has

specific formats and methods for evaluating students' understanding and language skills. Within the category of closed tests, various subtypes are used to assess different aspects of language proficiency. These include cloze tests, multiple-choice tests, and matching tests, among others. Below is a detailed explanation of each type of closed test, including their unique features and uses:

1. Cloze tests are designed to assess a student's ability to understand and use language in context. They involve a passage of text with certain words removed, requiring students to fill in the blanks with appropriate words. Cloze tests are further divided into several subtypes:

1.1. Traditional cloze tests: In traditional cloze tests, every 7th or 8th word is removed from a passage. Students are required to fill in these blanks based on their understanding of the context and content of the text. This format assesses students' ability to comprehend and predict language patterns and meaning.

1.2. Modified cloze tests: Modified cloze tests involve removing parts of a grammatical or lexical unit rather than individual words. For example, a test might remove key components of verb phrases or noun phrases, requiring students to use their knowledge of grammar and vocabulary to complete the sentences. This subtype focuses on more specific aspects of language use and structure.

1.3. Authentic cloze tests involve removing letters or words from the beginning or end of lines within a text. This format assesses students' ability to infer meaning and complete text based on context clues. It is particularly useful for evaluating reading comprehension and context-based vocabulary knowledge.

2. Multiple choice tests present students with a question or statement followed by several answer options. Students must select the correct answer from the provided choices. This format can be used to assess a range of language skills, including grammar, vocabulary, reading comprehension, and listening. Multiple choice tests are advantageous for their efficiency in scoring and their ability to cover a broad range of content in a single test.

2.1. Single-answer multiple choice: Students select the one correct answer from a set of options. This format is commonly used for straightforward questions where there

is a single correct response.

2.2. Multiple-answer multiple choice: Students may select one or more correct answers from a list of options. This format allows for the assessment of more complex knowledge and understanding.

3. Matching tests require students to establish a correspondence between pairs of items. These items might include words and their translations, questions and answers, or text and images. Matching tests are useful for assessing students' understanding of relationships and associations between different concepts.

3.1. Word-to-translation matching: Students match vocabulary words with their correct translations.

3.2. Question-to-answer matching: Students pair questions with the appropriate answers.

3.3. Text-to-image matching: Students match text excerpts with corresponding images or diagrams.

4. Consistency tests evaluate students' ability to sequence items correctly. These tests require students to place letters, words, sentences, or parts of a text in the proper order. This format assesses understanding of text structure and logical progression, as well as the ability to organize information coherently.

4. Letter sequencing: Students arrange letters to form a word or phrase.

4.1. Sentence sequencing: Students reorder sentences to create a logically coherent passage.

4.2. Text sequencing: Students arrange sections of a text in the correct order to ensure proper flow and coherence.

5. Short answer tests require students to provide brief responses, such as "Yes" or "No," or to determine if statements are "True" or "False." This format is useful for assessing students' ability to understand and recall specific information quickly. Short answer tests can be used to gauge knowledge of factual details or comprehension of simple statements.

6. Yes/No answers: Students respond to questions with a simple "Yes" or "No."

7. True/False statements: Students determine whether statements are correct or

incorrect.

When developing computer-based tests, there is a strong preference for using closed-type tasks due to their structured nature and ease of automated scoring. Closed-type tasks, which include formats such as multiple-choice questions, cloze tests, and matching exercises, offer several advantages in the context of electronic testing. These tasks are generally easier to standardize, automate, and grade, making them well-suited for large-scale assessments and for providing objective evaluations of student performance.

Closed-type tasks offer several significant advantages in educational assessments, making them a preferred choice for standardized testing. One of the primary benefits of these tasks is standardization. Since all students are presented with the same set of questions and answer options, the assessment process remains consistent and fair. This uniformity ensures that students are evaluated under equal conditions, allowing for reliable comparisons of their performance. Additionally, closed-type tasks contribute to efficient and accurate grading. Many of these tasks can be scored automatically by computer systems, significantly reducing the time required for assessment. Automated scoring not only minimizes human error but also provides timely feedback, enabling students to identify their mistakes and improve their learning outcomes.

Another key advantage of closed-type tasks is their objective evaluation process. Unlike open-ended tasks that may be subject to interpretation, closed-type questions generally have clear, correct answers. This objectivity helps ensure that students are assessed based on the same criteria, eliminating biases and inconsistencies that could arise from subjective grading. As a result, educators can more effectively measure students' actual knowledge and understanding of the subject matter.

Several types of closed-type tasks are commonly used in assessments. Multiple-choice questions are one of the most popular formats, requiring students to choose the correct answer from several options. These questions can assess a broad range of knowledge and cognitive skills, from basic recall to complex problem-solving. Another common format is the cloze test, in which certain words are removed from a passage, and students must fill in the blanks. This type of task evaluates students' ability to

understand context and apply language rules effectively. Matching exercises are another valuable closed-type task, where students must pair items such as vocabulary words with their definitions or questions with corresponding answers. This format helps assess students' comprehension of relationships between concepts, reinforcing their ability to recognize and recall information.

Despite the advantages of closed-type tasks, open-type tasks also play a crucial role in assessing students' deeper understanding and complex language skills. Unlike closed-type tasks, open-type tasks allow for greater flexibility in student responses, making them particularly useful for evaluating language production and application. These tasks require students to generate language rather than merely recognize the correct answer, offering a more comprehensive assessment of their linguistic abilities.

One effective open-type task involves supplementing a given text. This type of task can take various forms, such as word insertion, phrase insertion, or grammatical structure completion. For instance, in word insertion tasks, students are provided with a passage where certain words are omitted, and they must supply appropriate words to complete the text meaningfully. Phrase insertion tasks require students to add missing phrases or clauses to construct coherent sentences or paragraphs. Similarly, grammatical structure completion tasks assess students' ability to correctly insert specific grammatical elements, such as verb tenses or prepositions, to fit the context of a passage [27].

Open-type tasks offer several distinct benefits. They provide a more comprehensive assessment of language production, allowing educators to evaluate students' creative and functional use of language. Since these tasks permit a range of acceptable answers, they better reflect students' individual language skills and comprehension levels. Moreover, open-type tasks enhance the evaluation process by requiring students to produce language actively, rather than simply recognizing the correct answer. This approach provides deeper insights into their understanding of complex concepts and their ability to apply knowledge in practical contexts.

Incorporating both closed-type and open-type tasks into computer-based assessments can create a well-rounded evaluation framework. While closed-type tasks

ensure efficiency, objectivity, and standardization, open-type tasks allow for deeper exploration of students' linguistic abilities. By balancing these two approaches, educators can design assessments that effectively measure students' knowledge, comprehension, and practical application of language skills.

Conclusion

In summary, the development of computer-based tests is a complex process that requires careful consideration of several fundamental principles to ensure their effectiveness, fairness, and reliability. These principles serve as the foundation for creating assessments that accurately measure students' knowledge and skills while maintaining a structured and meaningful testing experience. By adhering to key guidelines, educators can design electronic tests that are both comprehensive and beneficial to students.

One of the most critical aspects of computer-based test development is the significance and clarity of questions. Well-formulated questions help ensure that students understand what is being asked, reducing the likelihood of misinterpretation. Clear and precise wording eliminates ambiguity, making it easier for students to focus on demonstrating their knowledge rather than deciphering complex instructions. Additionally, meaningful questions contribute to the overall validity of the test, ensuring that it effectively assesses the intended learning objectives.

Another essential factor in test design is managing test length. A well-balanced test should include an appropriate number of questions to cover the necessary content while avoiding unnecessary length that may cause fatigue or stress. Tests that are too short may fail to assess students' knowledge comprehensively, while overly long tests can lead to disengagement and reduced performance. Striking the right balance ensures that students remain focused and motivated throughout the assessment process.

It is also crucial to avoid including hints or provocative content in test questions. Providing direct hints can compromise the integrity of the assessment by guiding

students toward the correct answers rather than allowing them to demonstrate their true understanding. Similarly, provocative or controversial content should be excluded to maintain a neutral and inclusive testing environment. A well-designed test should challenge students while remaining free from distractions or biases that could affect their performance.

Ensuring task interconnection is another vital principle in computer-based test development. When tasks are meaningfully connected, students can apply their knowledge in a coherent and structured manner, reinforcing their understanding of key concepts. This interconnection helps create a logical progression within the test, allowing students to build upon previous knowledge and apply it to new contexts. As a result, assessments become more effective in measuring students' overall comprehension and cognitive skills.

Following the principle of progressing from simple to complex is also essential in test design. By organizing questions in an ascending order of difficulty, students can gradually build their confidence as they move through the assessment. Starting with simpler questions allows students to ease into the test, reducing anxiety and providing a sense of accomplishment. As they progress to more complex tasks, they are better prepared to tackle higher-order thinking challenges. This structured approach enhances the overall testing experience, making it more engaging and effective.

In addition to these core principles, it is important to consider the broader impact of computer-based assessments on students' learning experiences. Well-designed electronic tests not only evaluate knowledge but also promote deeper learning by encouraging students to apply their skills in real-world scenarios. By incorporating a variety of question types, such as multiple-choice, fill-in-the-blank, and interactive simulations, educators can create dynamic assessments that cater to different learning styles and cognitive abilities.

Furthermore, technology offers opportunities to enhance assessment strategies through adaptive testing. Adaptive tests adjust the difficulty of questions based on students' responses, providing a more personalized evaluation of their abilities. This approach ensures that students are neither overwhelmed by excessively difficult

questions nor under-challenged by overly simple ones. By leveraging adaptive testing technologies, educators can create more precise and individualized assessments that better reflect students' true capabilities.

As educational technology continues to evolve, maintaining these principles will be crucial for developing high-quality electronic tests that meet the diverse needs of modern learning environments. By focusing on clarity, fairness, interconnection, and structured progression, educators can design assessments that not only measure knowledge effectively but also foster a positive and meaningful testing experience for students. In doing so, they contribute to the advancement of digital education, ensuring that assessments remain a valuable tool for learning and academic growth.

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