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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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.