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## Communicative competence of future specialists in the information and digital educational environment

### Комунікативні компетентності майбутніх фахівців в інформаційно-цифровому освітньому середовищі

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Written by:

**Liudmyla Shuppe<sup>1</sup>** <https://orcid.org/0000-0002-0694-2563>**Valentyna Koval<sup>2</sup>** <https://orcid.org/0000-0002-7698-3600>**Halyna Sotska<sup>3</sup>** <https://orcid.org/0000-0002-0184-2715>**Olena Trynus<sup>4</sup>** <https://orcid.org/0000-0003-2945-0796>**Anna Melnyk<sup>5</sup>** <https://orcid.org/0000-0001-7983-3598>

#### Abstract


The article proves the importance of communicative competence for future specialists and shows the importance of principles for improving communication skills in order to bring them to the level of competence, the components of communicative competence are considered. The role of the information and digital educational environment for creating favorable conditions for the formation of communicative competence of future specialists is shown. The main organizational forms of education and the role of ICT, virtual learning environment, media educational technologies in the formation of communicative competence of future specialists are substantiated. The implemented and experimentally verified author's method of forming the communicative competence of future

#### Анотація


У статті доведено значення комунікативної компетентності для майбутніх фахівців та показано вагомість принципів для удосконалення навичок комунікації з метою доведення їх до рівня компетентності, розглянуто складові комунікативної компетентності. Показано роль інформаційно-цифрового освітнього середовища для створення сприятливих умов формування комунікативної компетентності майбутніх фахівців. Обґрунтовано основні організаційні форми навчання та роль ІКТ, віртуального навчального середовища, медіаосвітніх технологій у формуванні комунікативної компетентності майбутніх фахівців. Впроваджена та перевірена експериментально авторська методика формування

<sup>1</sup> Ph.D., Candidate of Science, Assistant Professor, Department of Romance Languages and Literatures, Masaryk University, Czech Republic.  WoS Researcher ID: JQI-2417-2023

<sup>2</sup> Doctor of Pedagogical Sciences, Professor, Professor of the Department of Ukrainian Language with Teaching Methods, Pavlo Tychyna Uman State Pedagogical University, Ukraine.  WoS Researcher ID: HJY-9802-2023

<sup>3</sup> Doctor of Pedagogical Sciences, Professor, Deputy director of Scientific and Experimental Work, Ivan Ziaziun Institute of Pedagogical Education and Adult Education of the National Academy of Educational Sciences of Ukraine, Ukraine.  WoS Researcher ID: G-2639-2019

<sup>4</sup> Candidate of Pedagogic Sciences, Senior Researcher, Scientific Secretary, Ivan Ziaziun Institute of Pedagogical and Adult Education of the National Academy of Educational Sciences of Ukraine, Ukraine.  WoS Researcher ID: G-2645-2019

<sup>5</sup> Candidate of Pedagogical Sciences, Senior Lecturer of the Department of Computer Sciences and Information Technologies, Zhytomyr Ivan Franko State University, Ukraine.  WoS Researcher ID: IUN-1147-2023



specialists in the information and digital educational environment led to a significant increase in the level of mastery of the system of theoretical knowledge in the disciplines of optional and mandatory educational components, methods of conducting training classes. The obtained quantitative indicators of the communicative competence of future specialists in the information and digital educational environment, introduced innovations in the theory and practice of pedagogy, methodology and training methods in the conditions of digitalization showed the effectiveness of the author's method developed by us.

**Keywords:** communicative competence, future specialists, information and digital educational environment, virtual educational environment, cloud services.

## Introduction

To ensure an effective educational process in institutions of higher education, it is necessary to focus on improving speaking skills and skills for the correct and expressive formation of thoughts and on the communicative comprehensive development of students of education, strengthening the connection with the future professional activity of students of higher education and the content of education (Hryban et al., 2022).

One of the main requirements of modern society for a competitive specialist in any field is the possession of a complex of values, attitudes, skills, abilities, and knowledge – possession of key competencies in communication in a foreign and native language; acquisition of learning skills, civil and social spheres; mathematics and basic concepts in the field of technology, science; computer literacy; entrepreneurship and innovation, cultural sphere.

The improvement of information and communication technologies, and the constant development of a modern information society, require a review of teaching organizations and teaching tools from teachers. Thus, among the current methods of language teaching, the computer-oriented one is singled out (Bloch, 2012) a process that allows students to constantly improve their level of communicative competence thanks to the unique functionality of the information and digital educational environment, which ensures the mobility of the learning process and the integrability of foreign languages and the native language of students, sources of obtaining data within the framework of the profession, real communication in a professional environment, which is important for a successful existence in the information and digital educational environment.

In the system of human relations, the communicative competence of future specialists in the information and digital educational environment is one of the main components of a person's professional adaptability, a high level of professional activity of specialists.

Therefore, there was a need to develop the communicative competence of future specialists, to learn the language as a means of professional communication in the information and digital educational environment, which is necessary for ensuring a person's professional communication.

Considering the communicative competence of future specialists in the information and digital educational environment in the article, we focused on the main aspects, such as:

комунікативної компетентності майбутніх фахівців в інформаційно-цифровому освітньому середовищі, призвела до значного зростання рівня опанування системи теоретичних знань у дисциплінах вибіркової та обов'язкової освітніх компонентів, методики проведення навчальних занять. Отримані кількісні показники комунікативної компетентності майбутніх фахівців в інформаційно-цифровому освітньому середовищі, внесені нововведення у теорію та практику педагогіки, методології та методику навчання в умовах цифровізації показав ефективність розробленої нами авторської методики.

**Ключові слова:** комунікативна компетентність, майбутні фахівці, інформаційно-цифрове освітнє середовище, віртуальне навчальне середовище, хмарні сервіси.

- The importance of communicative competence for future specialists and the importance of principles for improving communication skills to bring them to the level of competence, a component of communicative competence.
- Formation of an information and digital educational environment to create favorable conditions for the formation of communicative competence of future specialists.
- The main organizational forms of training for the formation of communicative competence of future specialists in the information and digital educational environment of a higher school.
- The role of ICT and virtual educational environment and media educational technologies in the formation of communicative competence of future specialists.
- An experimental study on the communicative competence of future specialists in the information and digital educational environment.

## Literature Review

The communicative competence of future specialists is very important in the information and digital educational environment since the student's activity is directly related to communication with colleagues, stakeholders, and teachers. Therefore, scientists devote their research to the development of the communicative competence of future specialists, language learning, and pedagogical communication as a means of professional communication in the information-digital educational environment, which is a necessity for ensuring professional communication in the context of professional adaptation of future specialists.

Thus, H. Dehtiarivova, & L. Rudenko (2010) consider the ways of developing the communicative competence of specialists and the problems of pedagogical communication of a person in the context of professional adaptation. Methodical support has been developed, the questions and tasks of which are aimed at logical, consistent, meaningful assimilation of knowledge for use in professional activities, and self-control of students; for future specialists in the field of service, the program of the course "Fundamentals of the psychology of professional communication" is presented.

L. Kaidalova (2016) devoted her research to the introduction of interactive technologies into the professional training of future medical and pharmaceutical specialists to form in higher education institutions the communicative competence of future specialists for working in an information-digital educational environment, developing personal and professional important qualities. In institutions of higher education, she has developed ways to ensure an effective educational process, which is focused on improving speech skills, comprehensive communicative development of students, strengthening the connection with future professional activities and the content of education, and the ability to convey thoughts clearly and correctly.

Learning the language as a means of professional communication is a necessity for the formation of communicative competence of future specialists in the information and digital educational environment while ensuring professional communication. Therefore, the research of scientists H. Hryban, O. Skoryi, D. Opanchuk, & N. Kosenko (2022) consists of the implementation and justification of pedagogical conditions for the formation of communicative competence in future coaches from various sports. The scientists concluded that "the formation of professional and communicative competencies of future coaches in the process of professional training is aimed at acquiring thorough knowledge, abilities, and skills from the disciplines of the main educational component of the curriculum", where both trainings of athletes and active learning methods were used.

The research of S. Shevchenko, & N. Falko (2020) is devoted to the problem of developing communicative competence in future psychologists. The relevance of research in the information and digital educational environment is due to the increased requirements for the professional competencies of future psychologists. It has been proven that "the presence of certain knowledge, abilities, and skills of psychology students ensures the effective implementation of the communicative process in professional activity, enables the specialist to successfully enter into various types of (verbal and non-verbal, oral and written) contacts to solve communicative tasks (transfer of information, conducting consultations, establishing and maintaining contacts and others)".

R. Kotsiuba (2020) developed methodological recommendations related to the development and formation of foreign language communicative competence of future medical specialists, which are built on the subject

of educational modules adapted to work in an information-digital educational environment and, to develop foreign language communicative competence of future specialists, devoted to the methodological principles of using computer-oriented methods of treatment.

O. Sukhomlyn (2022) searches for the innovativeness of the process of digitalization of education; and considers the relevance of digital competence in the system of higher education and ways of its formation in the process of professional training of future philologists. In the information and digital educational environment, the skills of students who possess digital competence and communicative competence are summarized more effectively, which encourages the individual to develop the digital and communicative competence of students, as well as didactic tasks, the methodical potential of information technologies, which act with the help of the application of information technologies, are analyzed.

O. Zhernovnikova, L. Peretiaga, A. Kovtun, M. Korduban, O. Nalyvaiko, & N. Nalyvaiko (2020) focused research on the formation of communicative and digital competence of future teachers using gamification. For research in the educational process, mobile applications were chosen: ClassDojo, DuoLingo, Brainscape, Coursera, and Socrative. The technology of forming the communicative and digital competence of future teachers using gamification was developed, theoretically grounded and implemented, which was implemented under the following conditions: during the processing of educational information – integration of means gamification in the process of training future teachers; selection of effective educational digital technologies; when working with digital educational technologies, the use of organizational and technical methods and measures to ensure information security; for the development of digital educational projects – the use of educational platforms.

S. Tolochko (2021) researched and substantiated the directions of digitalization of institutions of higher education, vocational and technical, and general secondary education and highlighted the specifics and essence of the digital competence of teachers in the conditions of distance learning. In this process, the role of the communicative competence of future specialists in the information and digital educational environment is shown.

N. Nahorna, V. Nahorny, & T. Kaplaushenko (2020) to determine the level of development of communication skills in pharmacists, outlined the problems of researching psychological features, proved the need for: moving away from traditional professional training, the relevance of forming the communication competence of future specialists, in the information and digital educational environment – general training of competent pharmacy specialists, formation of their competencies and qualities by the new specialist model.

So, we see that the communicative competence of future specialists is very important in the information and digital educational environment, since the student's activity is directly related to communication with colleagues, stakeholders, and teachers. Therefore, scientists devote their research to the communicative competence of specialists of various specialties, learning their language, and pedagogical communication in an information-digital educational environment, which is a necessity for ensuring professional communication in the context of professional adaptation of future specialists.

***The purpose of the study:*** formation of communicative competence of future specialists in the information and digital educational environment using the developed author's methodology.

## Methodology

During the research, we used the following methods to achieve the goal: analysis of literary sources, conversation, pedagogical observation, questionnaires, assessment of students' knowledge, and pedagogical formative experiment to evaluate the effectiveness of the means of forming the communicative competence of future specialists in the information and digital educational environment, to analyze the reliability research results and for processing digital material – methods of mathematical statistics.

The research was conducted in 2022-2023. 68 students of higher education took part in the experiment. In the students of the experimental group (33 respondents), communicative competence was formed in the process of learning based on the author's methodology. Applicants of the control group (35 respondents) studied according to the existing educational program of the university.

To improve and develop the communicative competence of the future experts of the experimental group, we created favorable conditions in the educational process of the higher education institution.

The implemented author's method of forming the communicative competence of future specialists in the information and digital educational environment led to a significant increase in the level of mastery of the system of theoretical knowledge in the disciplines of optional and mandatory educational components, methods of conducting training classes.

Studies have confirmed that theoretical knowledge determined the level of needs of future specialists for mastering communicative competencies and became the basis for activating the consciousness of those seeking higher education.

The assimilation of theoretical knowledge stimulated the students of higher education of the experimental group to accumulate individual information experience, analysis, and generalization of facts, and conclusions, activating their ability to systematize and retrospectively search for information, its synthesis, and analysis.

The formative stage of the experiment confirmed that the level of formation of the communicative competence of future specialists in the information and digital educational environment significantly increased in the experimental groups, while there were no significant changes in the students of the control groups.

## Results and Discussion

### **The importance of communicative competence for future specialists and the importance of principles for improving communication skills to bring them to the level of competence, a component of communicative competence.**

When preparing young people for life activities, communicative competence is recognized as the leading one in education, which is an indicator of the individual's adaptability to the assimilation of new social roles, to new living conditions, to interaction with the social and informational and digital educational environment, with various types of information and real objects.

The importance of the communicative competence of the future specialist is increasing in connection with the transition of education to the information and digital format of the educational environment, in connection with the impact on interaction, mutual understanding, and dialogue during education. Therefore, in the professional activity of a specialist, an important component is pedagogical communication, which is a means of ensuring the educational process and solving educational tasks between the teacher and students (Hryban et al., 2022).

To improve communication skills to the level of competence, it is necessary to adhere to the following principles:

- Continuity – a person always sends behavioral information non-verbally or verbally, therefore interpersonal communication is continuous;
- Purposefulness – people, pursuing certain goals, communicate with each other;
- Relativity – in the process of interaction, two scenarios are implemented: affect (to hate – from love), identification of the dominant participant, and therefore interpersonal communication is relative;
- Variability – depending on the perceived coding, communicative messages change (non-verbal or verbal symbols) and can be scripted, spontaneous, or constructed;
- Ethics – a person, in the process of communication, is inevitably guided by an ethical choice;
- Cultural diversity – communication depends on the gender, cultural affiliation of the participants, social status, age, education, and religious views (Dehtiarova & Rudenko, 2010).

The above principles are appropriate for interpersonal communication.

Components of communicative competence when analyzing the substantive issues of communicative competence:

- 1) Gnostic: a system of knowledge about the peculiarities of communication, the essence of communication, general cultural competence, and communication styles, which allows one to understand the interlocutor's associations, hidden contents, etc.;
- 2) Communicative: communicative skills, speech culture, which allows managing the situation of interaction with the subject of foreign language communication, establishing contact with the interlocutor; perceptually reflective skills, expressive, which provide the opportunity to understand oneself and to know the inner world of the communication partner;
- 3) Emotional: a high level of identification with the performed social and professional roles; interest in another person, humanistic approach to communication; willingness to engage in dialogic or personal relationships, developed reflection and empathy; psycho-emotional state of a person and positive self-concept.

M. Canale, & M. Swain (1980) divide the communicative competence of future specialists into the following components: strategic, sociolinguistic, grammatical, and discursive, and consider it as a synthesis of the system of skills, abilities, and knowledge necessary for communication between people.

### **Formation of an information and digital educational environment to create favorable conditions for the formation of communicative competence of future specialists.**

Based on the introduction of information and communication technologies and telecommunication means of communication, the information and digital educational environment of the institution of higher education is being created. "This is a holistic systematically organized informational and pedagogical open space, the components of which are informational, technical, educational and methodical, regulatory and legal, financial and economic, managerial support, and under certain organizational and pedagogical conditions, professional competence is formed in it learning according to an individual trajectory" (Kotsiuba, 2020).

Foreign researcher J. Egbert (2005) with the help of a computer, the language learning method (Computer-assisted language learning – CALL) is singled out as one of the leading methods, which has important functions: individual training and two-way training. Scientists use different terms to denote this method, which indicates the use of a computer in language learning and teaching, for example:

- Computer-mediated human communication (CMHC);
- Computer applications in second language acquisition (CASLA);
- Computer-mediated communication (CMC);
- Computer-assisted instruction (CAI);
- Web 2.0 tools;
- Social media;
- Internet-based language learning (IBLL);
- Mobile-oriented language learning (MALL);
- Online language learning (OLL);
- Google-assisted language learning (GALL);
- Technology-enhanced language learning (TELL).

These are different forms of technology-based language learning (TBLL).

It should be noted that the changes occurring in the formulation of the above terminology are adjusted with the progress of ICT and changes in foreign language teaching. J. Egbert (2005) analyzes the stages of formation of such an approach.

To form an informational and digital educational environment to create favorable conditions for the formation of communicative competence of future specialists I. Ivaniuk (2015) when studying in a computer-oriented environment the formation of multicultural competence of students, singles out the tools that are relevant in today's education. These methods are effective for creating favorable conditions for the formation of communicative competence of future specialists, solving the tasks of forming a specialist who is formed as a socially active and creative person and is ready for professional activity (Kotsiuba, 2020). Electronic teaching aids for language learning, such as computer training programs, electronic textbooks, manuals, etc., are of great importance for creating favorable conditions for the formation of communicative

competence of future specialists in the information and digital educational environment (Stratan-Artyshkova et al., 2022).

### **The main organizational forms of training for the formation of communicative competence of future specialists in the information and digital educational environment of a higher school.**

We will single out the main organizational forms of training that we use and have proven effective for the information and digital educational environment of a higher school: a seminar report of students using ICT, a webinar, a lecture using ICT, seminar classes on correction and testing of abilities and skills, knowledge using ICT, with the presentation of students' portfolios, research work using ICT (Plakhotnik et al., 2023).

### **The role of ICT and virtual educational environment and media educational technologies in the formation of communicative competence of future specialists.**

A virtual learning environment is important for the formation of the communicative competence of future specialists in the information and digital educational environment. We used the virtual educational environment as a software system that was created to support the educational process in distance education, where a special role, unlike a managed educational environment, by the individual goals, capabilities, work schedule, and training of students, is acquired by the possibility of managing the educational process of higher education schools, all subjects of educational activity.

To ensure the formation of the communicative competence of future specialists, a virtual learning environment is necessary, which should take into account all the necessary didactic properties of ICT.

We will single out the most effective didactic properties of computer-oriented learning tools for the formation of communicative competence of future specialists, which must be taken into account when creating a virtual learning environment:

- Information, manifested between the subjects of the educational process in the exchange of data;
- Adaptive, manifested in the organization of the demonstration of visual material, in maintaining the conditions for the learning process, ensuring a person-oriented approach to learning, independent work;
- Motivational, manifested in activation and stimulation of the cognitive activity of students of higher education;
- Interactive, which ensures the implementation of feedback and direct communication within the virtual educational environment, direct interaction of students of higher education with the educational tool;
- Compensatory, aimed at improving the quality of the educational process in the virtual educational environment through, for example, speeding up the work pace of those seeking higher education;
- Integrative, which involves the influence on the development of higher education students' abilities and skills to logically connect data obtained from different sources, select them, and analyze them;
- Administrative, aimed at providing feedback and assimilation and correction of the processes of data perception by students of higher education and organization and management of educational and cognitive activities of students of higher education;
- Controlling, which provides the possibility to monitor the educational activities of students of higher education and to carry out self-control;
- Evaluation, which allows the teacher to evaluate the achieved educational results and contributes to the self-evaluation of higher education applicants, establishing their compliance with the criteria and set tasks.

We believe that the main ICT necessary for the formation of communicative competence of future specialists are websites and blogs, Wikis and forums, electronic portfolios of two directions, and SpeakApps – for storing personal educational materials and for feedback with the teacher.

Wikis and forums, blogs, and websites provide an opportunity for students to work in groups, provide sources for finding the necessary information, allow discussion of professional problems, and contribute to the formation of communicative competence of future specialists.

We note the significance of the SpeakApps project for the formation of the communicative competence of future specialists, which focuses on the creation of an open and free online platform on which ICT (Moodle platform, SpeakApps Community, Tandem Support, Langblog Support, OER Support, Videochat Support)

are collected, which meet pedagogical goals and formation of communicative competence of future specialists; allow you to create teacher pages to monitor student learning and provide advice.

Virtual classes are supported by the SpeakApps platform, which facilitates easy access to innovative and interactive online tools for the purpose of forming the communicative competence of future specialists; provides access to tools and exercises for managing electronic manuals, synchronous educational activities of the student; allows subjects of educational activity to create a common space for the exchange of educational materials, ideas, methodologies.

The SpeakApps project program provides cross-country support for workshops, open source and other projects to share future innovations and resources.

SpeakApps tools are based on a cloud-based software-as-a-service model, which includes the learning management system Moodle, allows you to use SpeakApps tools through the cloud, covers the following modes:

- SpeakApps cloud mode;
- SpeakApps plugin mode, which allows the use and integration of SpeakApps tools into the client's learning platform, provided that it complies with the Global Learning Tools Interoperability specification.

These two modes are offered in two types of services.

1. Premium Service, which includes updates of tools and the educational platform, support in setting up tools and configurations, coverage described in the standard service of the educational platform; allows customization (the client's corporate image and logo), monitoring services, access to backup copies for students of higher education, periodic reports, the possibility of arranging special developments, individual support service.
2. Standard Service, which guarantees clients access to educational platforms and the most stable versions of tools; includes individual support service, client access to backup copies, monitoring, but does not offer special adaptations, graphics settings, individual development.

The SpeakApps project affects the formation of communicative competence of future professionals, giving teachers the opportunity to use SpeakApps Open Educational Resource materials in their online or blended learning approaches.

Mahara e-portfolio SpeakApps is a service that is part of a class based on the Moodle platform (Kotsiuba, 2020) and which we used for students to create electronic portfolios.

In order to form the communicative competence of future specialists, we constantly used cloud services, which provide students with a number of services:

- Database-as-a-Service ;
- Platform-as-a-Service;
- Storage-as-a-Service;
- Application-as-a-Service;
- Integration-as-a-Service;
- Process-as-a-Service;
- Management/Governance-as-a-Service;
- Testing-as-a-Service;
- Infrastructure-as-a-Service.

Google, Microsoft 365, Dropbox, etc. are among the most common cloud services in the educational field (Kamenska & Bokshyts, 2022).

Communicative competence presupposes the student's awareness of the essence, features of communication, goals, structure, means, possession of communicative skills and abilities, etc. A specialist should have inherent qualities (psychological, individual), which provide the personality with the desire to



constantly improve the communicative side of professional activity, awareness of the importance of effective professional communication (communicative orientation), give orientation to the main value – the personality of a person (humane position), and also give in in the process of communication, the ability to creatively, non-standardly solve communicative tasks that arise (communicative creativity). To a large extent, the style of communication is characterized by the culture of communication, external culture, system of elements, business etiquette, culture of behavior. "Communicative competence ensures mutual understanding, trust in relationships, efficiency in solving tasks" (Nahorna et al., 2020).

For this process, when forming the communicative competence of future specialists in the information and digital educational environment, pedagogical conditions with the use of media educational technologies are important, namely:

- Organization of the educational process with the use of media-educational technologies;
- Combination and selection of various learning technologies;
- Application of innovative and traditional media educational technologies;
- Promptness in providing information;
- Adaptation of students to the educational process using remote technologies;
- Provision of access to information support;
- Creation of a complex of educational and methodological support;
- Use of interdisciplinary connections;
- Motivation of higher education seekers and their stimulation of the ability to use various learning technologies and to know the professional mastery of these technologies;
- Provision of favorable learning conditions for self-improvement and self-development of students of higher education (Polishchuk et al., 2022).

Therefore, in the formation of communicative competence of future specialists in the information and digital educational environment, a necessary element is the use of media educational technologies in the educational process (Kamenska & Bokshyts, 2022).

Speaking about the interactive aspect of communicative competence, we pay attention to such features of communication of future specialists as friendliness with partners and colleagues in relationships, their unconditional personal acceptance, the ability to establish an optimal social-psychological distance, combine demandingness and independence, ensure personal openness and status subordination (Burlaienko, 2021).

### **Experimental research.**

We used the following research methods to achieve the goal: analysis of literary sources, conversation, pedagogical observation, questionnaires, assessment of students' knowledge, pedagogical formative experiment to evaluate the effectiveness of means of forming the communicative competence of future specialists in the information and digital educational environment, to analyze the reliability of the research results and to processing of digital material – methods of mathematical statistics.

The research was conducted in 2022-2023. 68 students of higher education took part in the experiment. In the students of the experimental group (33 respondents), communicative competence was formed in the process of learning based on the author's methodology. Applicants of the control group (35 respondents) studied according to the existing educational program of the university.

To improve and develop the communicative competence of future specialists in the educational process of a higher education institution, we have created favorable conditions that can ensure:

- 1) The level of culture of each student;
- 2) Full-fledged development in the information and digital educational environment of each of the elements of communicative competence;
- 3) Positive influence of social space;
- 4) The role of ICT and virtual educational environment and media educational technologies in the formation of communicative competence of future specialists;
- 5) Organizational forms of training for the formation of communicative competence of future specialists in the information and digital educational environment of a higher school;

6) Pedagogical conditions with the use of media educational technologies and their functions.

We carried out the formation of professional and communicative competences of the applicants in a specific educational space, taking into account the proposed favorable conditions.

To form communicative competences of future specialists, we used such forms of training as practical classes, lectures, individual work, industrial practice, independent work where active learning methods were used in the created informational and digital educational environment.

The students of the experimental group clearly understood the importance of communicative competence for future professional activity and the importance of principles for improving communication skills in order to bring them to the level of competence, they knew the components of communicative competence. With the help of the main organizational forms of education, the students of the experimental group were formed communicative competence in the information and digital educational environment of the higher school, which was necessary to create favorable conditions for the formation of communicative competence of future specialists.

ICT, virtual learning environment and media educational technologies were of great importance for the formation of communicative competence among the students of the experimental group.

During the research, we will identify the most effective didactic properties of computer-oriented learning tools for the formation of communicative competence of future specialists, which we took into account when creating a virtual learning environment.

In order to form the communicative competence of future specialists, we constantly used cloud services. An important argument in the formation of communicative competence of future specialists in the information and digital educational environment was the use of media educational technologies in the experimental group.

For this process, in the formation of communicative competence of future specialists in the information and digital educational environment, pedagogical conditions with the use of media educational technologies, which performed the following functions, were important: activation of students' educational and cognitive activities; informatization of the educational process; interactivity of learning; motivation to learn from future specialists; increasing the efficiency of assimilation of educational material by students of higher education; monitoring of the educational process; participation of students of higher education in video conferences; development of creative activity; academic mobility of students. The formation of communicative competence was carried out on the basis of B. Bloom's taxonomy of cognitive activity. According to B. Bloom's theory, the theory of systematization and classification of complexly organized areas of activity that have a hierarchical structure, we took into account six levels of cognition: understanding, knowledge, use, synthesis, analysis, evaluation.

Such an author's method contributed to the formation of skills, knowledge, communication abilities of education seekers, necessary for the formation of communicative competence of future specialists in the information and digital educational environment.

The special professional competences of specialists were formed closely with the communicative competences of future specialists in the information and digital educational environment, and this was a single joint process.

The conducted ascertainment experiment showed that:

- 16.3% of future specialists have a high level of communicative competence;
- 37.3% of future specialists have an average level of communicative competence;
- 46.4% of future specialists have a low level of communicative competence.

During the formative experiment, the introduction of the author's method of communicative competence of future specialists in the information and digital educational environment in the experimental group led to an increase in the number of higher education applicants:

- 35.2% – with a high level of communication competence formation;
- 51.5% – with an average level of communicative competence;
- 13.3% – low level of formation of communicative competence.

There were no significant changes in the control group.

The implemented author's method of forming the communicative competence of future specialists in the information and digital educational environment led to a significant increase in the level of mastery of the system of theoretical knowledge in the disciplines of optional and mandatory educational components, methods of conducting training classes.

Studies have confirmed that theoretical knowledge determined the level of needs of future specialists for mastering communicative competences and became the basis for activating the consciousness of those seeking higher education.

The assimilation of theoretical knowledge stimulated students of higher education to accumulate individual information experience, analysis and generalization of facts, conclusions, activated their ability to systematize and retrospectively search for information, its synthesis and analysis.

The formative stage of the experiment confirmed that the level of formation of the communicative competence of future specialists in the information and digital educational environment has significantly increased, while there are no significant changes in the students of the control groups.

## Conclusions

The value of communicative competence for future specialists is proven and the importance of principles for improving communication skills with the aim of bringing them to the level of competence is shown, the components of communicative competence are considered. The role of the information and digital educational environment for creating favorable conditions for the formation of communicative competence of future specialists is shown. The main organizational forms of training for the formation of communicative competence of future specialists in the information and digital educational environment of a higher school are substantiated. The role of ICT and virtual educational environment and media educational technologies in the formation of communicative competence of future specialists is shown. The most effective didactic properties of computer-oriented learning tools for the formation of communicative competence of future specialists are highlighted, which must be taken into account when creating a virtual learning environment.

In order to form the communicative competence of future specialists, the necessity of using cloud services, which provide essential services to students, is shown.

An important argument in the formation of the communicative competence of future specialists in the information and digital educational environment is the use of media educational technologies. For this process, in the formation of the communicative competence of future specialists in the information and digital educational environment, the proposed pedagogical conditions with the use of media educational technologies are important.

During the research, we used the following methods to achieve the goal: analysis of literary sources, conversation, pedagogical observation, questionnaires, assessment of students' knowledge, pedagogical formative experiment to evaluate the effectiveness of the means of forming the communicative competence of future specialists in the information and digital educational environment, to analyze the reliability research results and for processing digital material – methods of mathematical statistics.

The research was conducted in 2022-2023. 68 students of higher education took part in the experiment. In the students of the experimental group (33 respondents), communicative competence was formed in the process of learning based on the author's methodology. Applicants of the control group (35 respondents) studied according to the existing educational program of the university.

To improve and develop the communicative competence of the future experts of the experimental group, we created favorable conditions in the educational process of the higher education institution. The implemented author's method of forming the communicative competence of future specialists in the information and digital educational environment led to a significant increase in the level of mastery of the system of theoretical knowledge in the disciplines of optional and mandatory educational components, methods of conducting training classes.

Studies have confirmed that theoretical knowledge determined the level of needs of future specialists for mastering communicative competences and became the basis for activating the consciousness of those seeking higher education.

The assimilation of theoretical knowledge stimulated the students of higher education of the experimental group to accumulate individual information experience, analysis and generalization of facts, conclusions, activated their ability to systematize and retrospectively search for information, its synthesis and analysis.

The formative stage of the experiment confirmed that the level of formation of communicative competence of future specialists in the information and digital educational environment significantly increased in the experimental groups, while there were no significant changes in the students of the control groups.

Further research is needed to substantiate the directions of digitization of higher education institutions.

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