

DOI: <https://doi.org/10.34069/AI/2024.73.01.31>

How to Cite:

Kravchuk, O., Kochubei, M., Chovriy, S., Koycheva, T., & Pishun, S. (2024). Formation of professional communication of non-language specialists in higher education institutions. *Amazonia Investiga*, 13(73), 373-386. <https://doi.org/10.34069/AI/2024.73.01.31>

Formation of professional communication of non-language specialists in higher education institutions

Формування професійної комунікації фахівців немовних спеціальностей у закладах вищої освіти

Received: December 21, 2023

Accepted: January 28, 2024

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Abstract

The article reveals the meaning of the concept of "communication", and shows the effectiveness of professional communication and the communication space of non-language specialists in higher education institutions. The experimental research (ascertainment stage) made it possible to find out the existing level of formation of professional communication of specialists of non-language specialties in institutions of higher education, to single out shortcomings in the formation of professional communication of specialists, to single out the main factors affecting the insufficient development of professional communication of specialists and to develop in institutions of higher education necessary ways to overcome the insufficient development of the formation of professional communication of non-language specialists. Diagnosing the communicative competence of future specialists in non-language majors in institutions of higher

Анотація

У статті розкрито зміст поняття «комунікація», показано ефективність професійної комунікації та комунікаційного простору фахівців не мовних спеціальностей у закладах вищої освіти. Експериментальне дослідження (констатувальний етап) дозволило з'ясувати наявний рівень сформованості професійної комунікації фахівців не мовних спеціальностей у закладах вищої освіти, виокремити недоліки у формуванні професійної комунікації фахівців, виокремити основні фактори, що впливають на недостатній розвиток професійної комунікації фахівців та розробити у закладах вищої освіти необхідні шляхи подолання недостатнього розвитку сформованості професійної комунікації фахівців не мовних спеціальностей. Проведене діагностування комунікативної компетентності майбутніх фахівців не мовних спеціальностей у закладах вищої освіти та показано структуру комунікативної компетентності. На

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education was carried out and the structure of communicative competence was shown. At the formative stage of the experiment, to determine the actual level of formation of individual components of the communicative competence of future specialists, a diagnostic study was conducted using the diagnosis of the levels of formation of the components: cognitive-strategic, motivational-value, and activity-corrective. The rules of pedagogical communication for future specialists of non-language specialties have been developed.

Keywords: professional communication, professional activity, non-language specialists, higher education institutions, interaction of subjects.

Introduction

The functional role of communication acquires a special and necessary social-practical and theoretical-methodological actualization at the current stage of socio-economic and political development, which is caused by its total penetration into all spheres of social life. This led to the establishment of new communicative processes, structures, and forms, which ensured a qualitative change in the social and communicative environment in the modern world (Kozakov et al., 2017).

By the trends of human development and the demands of society, professional education undergoes innovative and constant changes. The communicative competence of specialists has gained special importance in the modern information society and provides the extremely important ability to negotiate, cooperate, and solve complex socio-cultural and scientific-technical problems. The communicative competence of future specialists in this context is the key to realizing their potential (Kraievskaya, 2015).

The basis of the goals of education is communicative requirements for the individual, especially in higher education institutions of pedagogical direction. It is in the educational environment of these institutions that the formation of the pedagogical educational system of attitudes of the student of higher education towards himself, the environment, and the ability to self-determine in life and pedagogical situations takes place.

A modern institution of higher education aims to create fundamentally new models of communication as a basic institution. Modern institutions of higher education intensively join the unified communication system of society,

формувальному етапі експерименту для визначення фактичного рівня сформованості окремих компонентів комунікативної компетентності майбутніх фахівців проведено діагностичне дослідження за допомогою діагностування рівнів сформованості компонентів: когнітивно-стратегічного, мотиваційно-ціннісного, діяльнісно-корегувального. Розроблено правила педагогічного спілкування для майбутніх фахівців не мовних спеціальностей.

Ключові слова: професійна комунікація, професійна діяльність, фахівці не мовних спеціальностей, заклади вищої освіти, взаємодія суб'єктів.

which in turn dynamically interacts with the socio-cultural global environment. In society, communication processes lead to the creation of social and communication space in institutions of higher education. At the same time, the current state of functioning of institutions of higher education is characterized by a constant, intensive increase in social and communication own space, which can characterize the totality of communication infrastructure, intellectual resources, information, and information technologies and includes various categories of subjects. At the same time, the social and communication space of a higher education institution is a component of the communication space (Bilychenko, 2021).

The process of formation of professional communication of non-language specialists in institutions of higher education has significant shortcomings: lack of perception of professional communication as a value, lack of motivation of the majority of students of higher education for professional mastery of communication, ignoring the communicative potential of educational professional disciplines, inconsistency of the content of communication-oriented disciplines, lack of methodology complex formation of structural components of professional communication of non-language specialists.

The study of the problem of the formation of professional communication of non-language specialists in institutions of higher education requires the identification of pedagogical conditions for the effectiveness of the specified process and consideration of this urgent issue taking into account modern trends in the development of the information society.

Literature review

The system-creating character of professional communication of specialists in institutions of higher education as a phenomenon that is the basis of social human life completely determines the attempts of systematic research by various scientists.

Therefore, based on the comprehensive approach of the formation of professional communication of non-language specialists in higher education institutions, the theory of communication can count on obtaining the desired results – to develop successfully, to reflect all the complexity and diversity of communicative reality, to be constantly enriched and improved with new knowledge. This methodological approach enabled O. Kraievska (2015) not only to systematize the source base of the studied phenomenon, but also to single out methodological techniques for the proposed scientific problem; create a model of communication competence formation of future agricultural managers; justify and experimentally verify the developed pedagogical conditions for the effective formation of communicative competence of future specialists.

The research of O. Bilychenko (2021) is interesting, where the place of digital strategy is highlighted in the functioning of the social and communication space of a higher education institution, the need for the use of digital tools, the transition to new, digital learning models is substantiated in the university educational process, the peculiarities of the social and communication space of a higher education institution are revealed.

The research of O. Kiryanova (2019) is devoted to the formation of motives for self-education in the process of communication between a student of higher education and a teacher of a higher school and the professional communication of non-language specialists. The scientist theoretically substantiated the pedagogical conditions for the formation of the principles and motives of self-education of future specialists in the process of learning. Also, the ways of forming communicative competence of future specialists and pedagogical conditions were considered by K. Kasiarum (2019). Communicative competence is defined as "based on knowledge and sensory experience, the ability of an individual to orient himself in situations of pedagogical communication in order to solve communicative tasks, the readiness to understand

the motives and strategies of behavior of both his own and communication partners, the ability to carry out effective communication within the limits of business communication in order to solve professional tasks and the appropriate level of mastering communication technologies".

O. Shkurenko (2016), the state of the formation of professional-pedagogical communication was investigated, and the theoretical foundations of the formation of professional-pedagogical communication in the future primary school teacher were highlighted, which is presented as the main component of the professional training of the future specialist.

In turn, scientists A. Tsang, A. Paran & W. Lau (2023) in their articles consider the problem of the language and non-language benefits of literature in foreign language education. S. Marinov, M. Soulé & J. Cots (2021) examine the role of context, understood here as a site for social practices in particular settings, before and during study abroad in the development of students' plurilingual identities. In particular, we focus on different levels of contextual constraints and opportunities to which students who are non-language majors refer in semi-structured interviews.

Educators C. Nguyen & T. Nguyen (2020) in their work «Non-language-major students' autonomy in learning English in Vietnam» focus on the fact that the English language is one of the international languages used for communication and learning worldwide.

Interrogating the construct of communicative competence in language assessment contexts is considered by C. Elder, T. McNamara, H. Kim, J. Pill & T. Sato (2017). They emphasize that models of communicative competence in a second language invoked in defining the construct of widely used tests of communicative language ability have drawn largely on the work of language specialists. The risk of exclusive reliance on language expertise to conceptualize, design, and administer language tests is that test scores may carry meanings that are misaligned with the values of non-language specialists, that is, those without language expertise but perhaps with expert knowledge in the domain of concern. Neglect of the perspective of lay (i.e., non-linguistic) judges on language and communication is a serious validity concern, since they are the ultimate arbiters of what matters for effective communication in the relevant context of language use.

So, the scientists investigated the state of formation of professional-pedagogical communication, found out the ways of forming the communicative competence of future specialists and pedagogical conditions, and considered the need for a favorable social and communication space for quality education in general in the institution of higher education. The study of the problem of the formation of professional communication of non-language specialists in higher education institutions requires consideration of this topical issue, taking into account modern trends in updating the methodology of complex formation of structural components of professional communication of non-language specialists, identifying pedagogical conditions for the effectiveness of the specified process.

The aim of the study. To conduct an experimental study with the aim of clarifying the existing level of formation of professional communication of non-language specialists in institutions of higher education and to show ways of forming their communicative competence, to single out shortcomings, the main factors affecting the insufficient development of professional communication of specialists of non-language specialties in institutions of higher education and to develop the necessary ways to overcome the insufficient development of the formation of professional communication in institutions of higher education.

Methodology

To achieve the goal, the following research methods were used in the research process:

- theoretical (analysis of methodical, psychological, pedagogical, philosophical literature, comparison, synthesis, modeling, generalization, systematization) made it possible to determine the structure of professional communication of non-language specialists in higher education institutions, the essence of the main research concepts;
- empirical (testing, pedagogical experiment, observation) made it possible to determine the level of formation of professional communication of non-language specialists in higher education institutions;
- mathematical statistics (quantitative and qualitative analysis of experimental data; verification of statistical hypotheses according to the Wilcoxon, Fisher, Pearson criteria) made it possible to prove the homogeneity of the control and

experimental groups, to find correlations between the components of professional communication of non-language specialists, to show the reliability and significance of experimental data.

Experimental research base. The research was conducted during 2022-2023. 132 students of higher education were involved.

When determining the sample of subjects, the general specificity of the subject of the study was taken into account. The sample was formed by random selection using the technical procedure for calculating the selection step.

The research was carried out in two stages. The first stage included the analysis of psychological and pedagogical literature on the specified problem. Here, a diagnosis of the formation of professional communication of non-language specialists in institutions of higher education was carried out, with the aim of determining its level; The II stage included the development, research, and implementation of pedagogical conditions for the formation of professional communication of non-language specialists in higher education institutions.

The reliability and validity of the obtained results, and the objectivity of their assessment were ensured by the methodological soundness of the initial positions and the qualitative mechanism for evaluating the quality under study, the use of a complex of complementary research methods, and the involvement of a group of respondents from a higher educational institution in the analysis of its results.

To assess the homogeneity of experimental and control data, statistical processing was performed using MS Excel and SPSS (Statistical Package for Social Science).

Results and discussion

1. The content of the concept of "communication" in scientific literature.

The analysis of literary sources shows that the very term communication "highlights to the highest extent a complex and multifaceted phenomenon that permeates not only the social organism, but also operates outside the boundaries of society as such, that is, in nature."

The concept of "communication" is presented by scientists as:

- 1) connection of one place with another;
- 2) message path;
- 3) transmission from person to person of information carried out using language;
- 4) communication;
- 5) signaling methods of communication in animals.

The term "communication" still does not have a generally accepted definition. American researchers F. Dance and K. Larson did the calculations and found out that there are about 126 definitions of the term "communication". The emergence of the concept of "communication" in scientific literature is associated with the founder of American sociology, Charles Cooley, at the beginning of the 20th century. considered communication to be a mechanism by which the development of human relations, and the existence of society becomes possible, in his opinion, communication includes all symbols of the mind in space along with the methods of their transmission and preservation in time. Communication includes the latest achievements in conquering space and time, communication, facial expressions, gestures, words, tone of voice, printing, writing, and telephone. There is no clear line between the outside world and the means of communication. The system of standard symbols appears with the birth of the external world and is intended only for the transmission of thoughts. It is from it that the development of communication begins (Kozakov et al., 2017).

The most common is the understanding of the concept of communication, which "comes from the Latin *communicatio* – unity, transmission, connection, message related to the Latin verb *communico* – to make common, to communicate, to connect, derived from Lat. *communis* – common and is used today to denote the connection of any objects of the material and spiritual world. It also means communication, message, news, interaction, exchange of information in society, creation and dissemination of information, and means of communication (Calderón & Castillo, 2015).

The history of the formation of the scientific study and analysis of the concept of "communication" unfolds against the background of constantly changing real problems.

The idea of "division of labor" became the first theoretical step in substantiating the concept of "communication", which was formulated as a

scientific hypothesis by the English scientist A. Smith (1723–1790), who believed that communication is a necessary prerequisite for any division of labor in any field, which makes it possible to structure economic activity by organizing collective work. "Communication", in his opinion, is unity, connection, transfer, message, message, exchange of information, interaction in society, a means of communication, distribution, and creation of information.

As a social phenomenon, the communication of any subject to the object expresses the unilinear orientation of the information influence, and the reaction or feedback of the object to the influence is not expected.

Therefore, the definition of the concepts of "communication" "can be grouped on three grounds: first, communication is considered as a connection between different objects. Such a non-categorical definition is characteristic mainly for the everyday understanding of communication. Secondly, communication is understood as an analogue of communication. Thirdly, communication is understood as an analogue of influence" (Kozakov et al., 2017).

2. Effectiveness of professional communication and communication space of non-language specialists in higher education institutions.

Professional communication of non-language specialists in institutions of higher education sets requirements for the teacher's personality qualities, which are specific. The most important requirement is communicativeness as a necessary prerequisite for active and successful work with pedagogical information of specialists in non-language specialties in institutions of higher education: information aimed at educating and training students of higher education (Álvarez Valencia & Michelson, 2023).

Communicative pedagogical professional activity of specialists of non-language majors in institutions of higher education is an activity with the help of which the teacher, through communication, organizes the exchange of information, transfers knowledge, manages the cognitive and practical activities of students of higher education, and regulates mutual relations between them (Haukås et al., 2022).

The higher the productivity of communication, the greater the number of means of perception

and sources of information involved in a certain pedagogical situation. This happens because information is received not by one, but by different channels of perception: auditory, visual, and tactile.

Effective professional communication of specialists of non-language majors in institutions of higher education is the one that is productive in pedagogical communication – it is an interpersonal, equal interaction based on cooperation and dialogue, aimed at unifying the common efforts of subjects and their coordination for the purpose of individual satisfaction of each student of higher education and increasing the level of his activity in joint collective activities in the institution of higher education (Mukan et al., 2020).

3. Communication space and communication environment.

We consider the communication space of non-language specialists in higher education institutions as:

- an educational sphere in which, with the help of communications, information exchange is carried out;
- an educational space where the communicative process takes place;
- a system of communicative multiple connections between various communication agents, which can be represented by social institutions, groups of people, and individuals.

The communication space is characterized by the number of interactions, intensity, and distance between agents of communicative interaction. The structural basis of the communication space is the social and communication space of the institution of higher education. It appears in the form of a complex multi-element formation.

We understand the professional communication of any non-language specialist in a higher education institution as the exchange of educational information with the help of modern information and communication tools, and the exchange of documentation through certain communication channels.

Communication environment is not equivalent to communication space. Thus, students of higher education, existing in the same communication space, can move from one communication environment to another. Sometimes these environments are extremely heterogeneous, but

the student of higher education perceives them as a single entity. Students of higher education can be simultaneously in different (for example, in the virtual reality communication environment) communication environments: computer games, communication on the Internet, etc.).

The communication space of non-language specialists in institutions of higher education acts as a basic institution for the creation of new communication models (Hernández-Jorge et al., 2022).

In the conditions of the activation of the information flow in institutions of higher education, the goal of the student's activity is the production, accumulation, distribution, and preservation of the entire amount of knowledge, regardless of the location of the user, providing various forms of access to them (Bilychenko, 2021).

One of the main tasks facing institutions of higher education is to provide the state with competitive specialists who have a high level of professional training. And the formation of professionally significant communication skills and abilities in future specialists is one of the main trends in improving the educational process. It is difficult to overestimate the role of communication in the professional activity of non-language specialists. Effective professional communication of a non-linguistic specialist is the basis of the successful activity of a modern person. The professionalism of a specialist depends primarily on his style of communication, communicative qualities, integral sensitivity to the object of communication, the power of influence on the behavior of other people, and the process and result of professional activity. Through the actions of the individual, the communicative side of communication is manifested, it is through the actions that conscious orientation to their meaningful perception by other people takes place. It is not just the movement of information that occurs in the communicative process, but also an active exchange of it, in which the significance of one or another message plays the main role. In the training of a specialist, the formation of competent communication skills is important. The professional or scientific literacy of a specialist is inevitably reflected in the attitude towards the specialist of all who communicate with him. And the future of a specialist depends on the ability to communicate in a professional environment.

Academic literacy is also important, which is achieved with the help of the comprehensive development of the system of certain skills in the learning process. The level of academic literacy serves as a criterion that determines a specialist's readiness for training, advanced training, and scientific work.

Stages and factors of studying scientific sources of information.

The task of higher education institutions in order to form professional communication of non-language specialists is to provide the future specialist with the tools to work with literature, quickly understand its structure, correctly record and evaluate in a convenient form everything that seems necessary and interesting for conducting scientific research.

The stages of studying scientific sources of information can be divided into:

- general introduction;
- reviewing the selected literature;
- in accordance with the order of study, the content of the work, systematization and processing of scientific sources of information;
- according to the sequence of placement of study material and reading of scientific sources of information;
- selective reading of individual parts of scientific sources of information;
- for the purpose of forming the text of a scientific research paper, writing out the necessary material by students;
- final recording and editing in the form of a fragment of the text of a scientific work (term (master's) work, article, dissertation, monograph, etc.);
- critical assessment of what has been recorded. It is worth selecting only scientific facts in the process of processing the sources of specialized literature (Yemelyanova et al., 2022).

Therefore, the need for the formation of professional communication of non-language specialists in institutions of higher education is determined by the following factors:

- 1) professional communication of specialists is a prerequisite for successful activity;
- 2) the importance of specialist training in modern conditions is growing;
- 3) professional communication of non-language specialists is a necessary

component of self-improvement and self-realization of an individual (Bielikova et al., 2016).

4. Division of communications at the level of a higher education institution.

We define the communication space of a student of higher education as a communication system of groups that have different values, statuses, functions, and needs. In the institution of higher education, communication is divided into levels. The first level is students of higher education and teachers who communicate in classrooms, carrying out a constant process of knowledge transfer.

The second level is deans and students of higher education, students of higher education and the control room, deans – control room – teachers who carry out the process of organizing the transfer of knowledge).

The third level is teachers – the management of faculties, departments – the rectorate, which contribute to the definition of educational technologies and their content.

The fourth level of communication is the rectorate – the ministry.

Professional communication of non-language specialists in higher education institutions ensures the movement of educational information in space and time with the help of documentation in paper form and in digital form, thanks to the constant development and modernization of new information and communication technologies. Integrating into the global information space, modern institutions of higher education cannot be competitive and effective without offering their educational services in the international information space. At present, in institutions of higher education, one of the most important places in the improvement and formation of the educational process is occupied by communication. Social and communication processes, which are global, actively influence the processes of exchange of scientific, educational, educational information, in the entire field of education, not only between students of higher education and teachers within the framework of one institution of higher education, but also by involving others in the exchange.

5. The structure of professional communication of non-language specialists in institutions of higher education.

The structure of professional communication of non-linguistic specialists in institutions of higher education includes the following two main components: educational space and communication environment, within which digital structures and communication processes ensure the purposeful circulation of professional knowledge and social information in the space-time continuum of society.

The study of the digital component between system elements in a higher education institution reveals the following functional properties:

- ensuring the process of exchange and transmission of educational scientific information;
- the ability to be a channel of formation, accumulation, collection, and distribution of information in space and time;
- the existence of a material medium that affects the process of transmitting educational information in space and time;
- the ability to be the result and means of educational activity;
- support and provision of socialization processes;
- promotion of the innovative process of formation of new knowledge;
- directing information, with the aim of ensuring the use of information and communication technologies.

In the communication space of the institution of higher education, the following four main subjects with their own status, values, and interests function: the state, the administration of the institution of higher education, students of higher education, and teachers (Bilychenko, 2021).

The components of pedagogical optimal communication in institutions of higher education are:

- the high authority of the teacher, their respect and love for higher education seekers, and the mutual return of the student, which is the most important condition for the success of pedagogical communication, the entire educational process of the higher school;

- techniques of communication and the human psyche, the teacher must be trained as a practical psychologist;
- experience accumulated in everyday practice, which includes skill and mastery (Vakulyk et al., 2022).

6. Experimental study.

Based on the fact that effective communication is interpersonal, equal, interaction that is productive in pedagogical communication and is based on cooperation and dialogue, aimed at unifying and coordinating the common efforts of higher education seekers for the individual satisfaction of everyone in joint collective activities and in order to increase the level of their activity (Kuchai et al., 2018) we conducted research during 2022-2023. 432 students of higher education were involved.

The research was carried out in two stages.

The first stage included the analysis of psychological and pedagogical literature on the specified problem. Here, a diagnosis of the formation of professional communication of non-language specialists in institutions of higher education was carried out, with the aim of determining its level.

The II stage included the development, research, and implementation of pedagogical conditions for the formation of professional communication of non-language specialists in higher education institutions, which we singled out as the most effective:

- formation of motivation of future specialists through a series of heuristic conversations for communicative activity in the process of professional training;
- step-by-step design of the content of the formation of professional communication of non-language specialists in institutions of higher education based on integrative and systemic approaches by introducing communicative blocks into professional disciplines and integrating and harmonizing communication-oriented disciplines;
- application of the method of formation of professional communication of non-language specialists in institutions of higher education with the use of information technologies through the organization of independent work of students, development of informational and methodological support.

- involvement of future specialists in communicative activities during the mastering of professional disciplines;
- development of a complex of communicative situational training.

We took into account that in order to conduct an experiment, the selection of the base must meet the requirement: all elements of the population must have the same chance of being included in the population of the sample.

Questionnaires, interviews, and surveys were conducted among students of higher education in the 3rd and 4th years of bachelor's degrees.

The purpose of the declarative experiment was to determine the essence of the problem, to determine the purpose of the study, to find out the existing level of formation of professional communication of specialists of non-language specialties in institutions of higher education, to single out shortcomings in the formation of professional communication of specialists of non-language specialties in institutions of higher education.

The necessary groups for the experiment were chosen so that they were sufficiently representative from the point of view of the goals of the experiment.

During the survey, applicants for higher education were asked several questions:

1. Define communication.
2. Describe the essence of professional communication of specialists.
3. Name the types of communication that should be used in professional activities.
4. How does communication knowledge affect the development of pedagogical skills?

We made the following conclusions after analyzing the results of the survey:

- students were able to define the term "communication" or "pedagogical communication": EG – 19%; CG – 17%;
- the essence of professional communication of specialists was revealed by: EG – 22%, CG – 24% of respondents;
- showed communication knowledge that affects the development of pedagogical skills, highlighted the types of communication that should be used in professional activity by 17% of respondents;

- respondents claimed that knowledge of the theoretical foundations of communication will significantly affect the pedagogical skill of a specialist (EG – 29%; CG – 30%). During the experiment, it was found that the majority of respondents experienced problems when conducting training and simulation classes, did not have the means of communication (EG – 31%; CG – 32%);
- only 18% of students showed good communication skills and abilities, but they had problems due to their small vocabulary;
- a large number of higher education students use slangisms, dialects, etc. in their vocabulary (EG – 32%; CG – 33%).

The research conducted in institutions of higher education proved that the future specialists of non-language majors have insufficiently developed skills to formulate the purpose of future activity, professional communication skills, reasonableness, and expediency of professional communication; respondents cannot effectively organize the educational process, and form communicative situations.

The main factors affecting the insufficient development of professional communication of non-language specialists in institutions of higher education were determined according to the results of the questionnaire:

- insufficient number of literary sources in institutions of higher education for mastering the practical skills of professional communication of non-language specialists;
- lack of theoretical knowledge of non-language specialists on communication problems;
- low level of practical skills and experience of non-language specialists in the application of professional communication in practice.

7. Ways to overcome insufficient development of professional communication skills of non-language specialists in higher education institutions.

Having identified the main shortcomings and factors that affect the insufficient development of the professional communication of non-language specialists in higher education institutions, we offer ways to overcome this problem.

When training future specialists, you should:

- emphasize the creation of conditions for interaction;
- to encourage higher education seekers;
- direct the educational space to the development of cooperation skills, to collective work where it is appropriate in a collective and informational environment.

This path, in the further professional activity of each specialist, contributes to learning to cooperate in the conditions of using communication tools for various activities.

In order to find out the state of understanding of the importance and necessity of the formation of professional communication of specialists of non-language specialties in institutions of higher education and to conduct an ascertaining experiment among students of higher education, we systematically conducted training seminars on mastering innovative technologies by future specialists. At such seminars, it is envisaged to find out the state of the use of innovative technologies in the educational space and prepare specialists to conduct practical training using interactive technologies.

8. Diagnosing the communicative competence of future specialists of non-language majors in institutions of higher education.

The analysis of scientific works and the real state of formation of professional communication of non-language specialists in institutions of higher education made it possible to identify: systemic problems, in particular, the lack of methodological recommendations with a full, versatile consideration of all types of communicative activity and an explanation of its importance in professional activity; lack of methodological focus on the formation of components of communicative competence during the study of professional disciplines, etc. Recognition of the need to develop the communicative competence of non-language specialists in institutions of higher education has a declarative rather than an applied nature. Diagnostics of communicative training of future specialists of non-language majors in institutions of higher education revealed that only 6.8% of respondents have a high level of communicative competence, 35.6% have an average level, and 57.5% have a low level of communicative competence, which indicates problems in their professional preparation for future communicative activities.

9. The structure of communicative competence of future specialists in non-language majors.

The study determined the structure of the communicative competence of future non-language specialists according to the structure of communicative activity:

The motivational and value component of the communicative competence of future specialists in non-language specialties involves the formation of motivation for foreign language communication of professional value; motivation for communication as a universal human value; and motivation as the ability to motivate others to general and professional communication.

The cognitive-strategic component of the communicative competence of future specialists in non-language specialties includes: knowledge of the main sections of professional disciplines; knowledge of non-verbal communication; knowledge of symbolic communication; and knowledge of a technical nature to ensure the information and technical component of communicative activity.

The activity-corrective component of the communicative competence of future specialists of non-language specialties based on a complex system of motivation of communicative potential is a practical manifestation in communicative activity of knowledge of non-verbal, verbal, information-technological, symbolic-symbolic, emotional-sensual components of communicative activity.

The criteria of communicative competence of future agrarian managers are defined as: motivational; cognitive; active.

The method of complex formation of structural components of communicative competence (motivational-value, cognitive-strategic, activity-corrective) of future specialists in non-language specialties with the use of information technologies involves: the use of conversations; portfolio, micro situation analysis methods, communicative blocks, round table; video method, case study, business game methods, psychological training, etc.

A great positive influence on the method of complex formation of structural components of communicative competence is observed in the use of information technologies YouTube, E-mail, Skype, and the author's blog for the formation of all components of communicative

competence of future specialists of non-language specialties.

The complexity of forming the structural components of the communicative competence of future specialists in non-language specialties lies in the focus of the methodology on all components, taking into account their features, and on achieving the overall goal – the formation of communicative competence.

The effectiveness of pedagogical conditions for the formation of communicative competence of future specialists in non-language specialties was confirmed during the pedagogical experiment. We determined the control and experimental groups, taking into account validity and integrity. At the formative stage of the experiment, to determine the actual level of formation of individual components of the communicative competence of future specialists in non-language specialties, a diagnostic study was conducted using the author's method of diagnosing the levels of formation of components: cognitive-strategic, motivational-value, activity-corrective. The correlations between the components of competence in the control and experimental groups, and the dynamics of changes in the levels of communicative competence were studied. It was found that the implementation of the specified pedagogical conditions gave the following results at the formative stage of the experiment:

- compared to the level of the control group – 9.3% we observe an increase in the level of communicative competence of the experimental group;
- the number of respondents with a high level is 8.7% higher in the experimental group compared to the control group;
- compared to the control group, we observe a 26.1% lower number of respondents with a low level than in the experimental group;
- the average number of respondents in the experimental group is 17.4% higher than in the control group.

We believe that the increase in the number of future specialists in non-language specialties with a high and medium level and a significant decrease in the number of respondents with a low level of communicative competence is significant. This is a particularly important result. The study showed that: the sample distributions obtained in the experimental and control groups are subject to a normal distribution, that is, the experimental values are not random.

The significance of the differences between the results of the experimental and control groups was determined using the Fisher distribution and the Pearson test. The homogeneity of these groups was proven using the Wilcoxon test.

Correlations were established between the components of communicative competence. It was found that the correlation coefficient between them is in the range of 0.75 – 0.8.

Between 0.6 and 0.8 is the correlation coefficient between the levels of motivation for communication. It turned out to be the closest correlation between the communication motivation of future specialists in non-language specialties as a universal human value and communication motivation.

The effectiveness of the formation of communicative competence of future specialists in non-language specialties was proven by our experiment through the implementation of the developed pedagogical conditions.

If the ascertaining stage of the experiment indicated the low effectiveness of the professional training of future specialists of non-language majors for their future professional communicative activities:

- 6.9% of future non-language specialists had a high level of communicative competence;
- 57.5% of future specialists in non-language specialties had a low level.

So, the results of the formative stage of the experiment are as follows:

- 16.5% of the respondents in the experimental group have a high level of communicative competence,
- 52.5% of future specialists in non-language majors have an average level,
- 31% – low level;

10. Rules of pedagogical communication for future specialists of non-language majors.

As a result of the study, the rules of pedagogical communication for future specialists of non-language majors have been identified, which will enable those seeking higher education to avoid many mistakes in their professional activities (Chagovets et al., 2020):

- take into account in professional activities that success in work always depends on the culture of communication;
- model communication based on the needs and interests of colleagues, not "from yourself";
- take into account the psychological state of an individual and the team as a whole;
- focus your speech on a specific person, and not on an abstract group of people;
- use different types of communication;
- enter into communication with the individual, organize it based on mutual interests, and not from top to bottom;
- consider the opinion of the interlocutor, be able to listen to colleagues;
- do not degrade the human dignity of the interlocutor;
- try to understand the mood of the interlocutors by organizing communication, and modeling communication with them;
- analyze your actions and deeds, look at yourself from the side;
- communication should prevent conflicts, not lead to them;
- take into account the gender of the interlocutor in the communication process;
- communication between interlocutors should be systematic;
- keep the initiative of communicating with interlocutors in your own hands;
- constantly look for means, new forms, techniques, and methods, avoid stereotypes in communication;
- smile as often as possible to the interlocutor: it encourages productive communication, gives positive emotions;
- in relation to a specific interlocutor, overcome negative attitudes;
- avoid abstract criticism of the interlocutor in the process of communication;
- strive for encouragement and approval in the process of your communication with interlocutors;
- keep the course of the situation in mind, develop your communicative memory;
- openly express your attitude to interlocutors in the team;
- develop the course and plan of the conversation in advance, if there is a need for an individual conversation with the interlocutor;
- systematically analyze the communication process;
- the center of attention of the communication process should be the personality of the interlocutor, his dignity;

- take into account the socio-psychological growth of the interlocutor;
- think over the peculiarities of communication and its course with problematic interlocutors;
- in the process of communication, take into account the individual characteristics of the interlocutor, the manifestation of his character, temperament;
- constantly improve your own speech – a communication tool.

Conclusions

The study reveals the meaning of the concept of "communication" in scientific literature, and shows the effectiveness of professional communication and the communication space of non-language specialists in higher education institutions.

We consider the communication space of non-language specialists in higher education institutions as: an educational sphere, an educational space, a system of numerous communicative connections between various communication agents. The stages and factors of the study of scientific sources of information are singled out, the division of communications at the level of a higher education institution is made, and the structure of professional communication of non-linguistic specialists in higher education institutions is disclosed.

The experimental research (ascertainment stage) made it possible to find out the existing level of formation of professional communication of non-language specialists in institutions of higher education, to single out shortcomings in the formation of professional communication of specialists, to single out the main factors affecting the insufficient development of professional communication of specialists in non-language specialties in institutions of higher education education Ways to overcome the insufficient development of professional communication skills of non-language specialists in higher education institutions have been developed.

Diagnosing the communicative competence of future specialists in non-language majors in higher education institutions was carried out. and the structure of communicative competence is shown. At the formative stage of the experiment, to determine the actual level of formation of individual components of the communicative competence of future

specialists in non-language specialties, a diagnostic study was conducted with the help of diagnosing the levels of formation of components: cognitive-strategic, motivational-value, activity-corrective. The effectiveness of the formation of communicative competence of future specialists in non-language specialties was proven by our experiment.

The rules of pedagogical communication for future specialists of non-language specialties have been developed.

Further research will be directed at the emerging features of the social and communication space of higher education institutions.

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