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PEDAGOGICAL CONDITIONS OF PROFESSIONAL FOREIGN LANGUAGE COMPETENCE FORMATION OF FUTURE ENGINEERS USING INFORMATION TECHNOLOGIES

Abstract. Internal contradictions between growing needs and the possibilities of their satisfaction are the driving force of the professional development of a specialist, i.e., motivation that affects a person and his activities. Motivation is the driving force of human behavior, it is based on motives, i.e. specific aspirations, urges, reasons for the individual's actions, which determine his attitude to activities, determine his direction. There are external and internal motives. Internal motives are related to the cognitive need of the subject of study, with satisfaction from the learning process. The dominance of internal motivation is manifested in the activity of the subject in the process of his educational activity. The external motive of activity is not the goal of learning, but a means.

Formation of motivation occurs under the influence of external and internal conditions. The external conditions should include the content of training, methods of training, material and technical support, psychological climate during the training process, etc. Among the internal conditions for the formation of motivation, different forms of interaction and communication, the position of the subject in various types of activities, and the orientation of the individual are distinguished.

Communicative activity is a purposeful process of information exchange in the presence of feedback, which is the basis of human activity, the emergence and
development of interpersonal relationships. It is not an independent and independent activity, its course is influenced by external (environment, partners in communicative activity) and internal (acceptance, awareness of the communicative task by the subject of communicative activity) conditions. The communicative activity of the future engineer is a motivated process of using one or another means to achieve a communicative goal, which culminates in a certain result. We created situations of professional communication in the form of business games, training, problem situations using information technologies in which types of educational-speech, communicative and informational activities were combined, that is, the study of educational material, determined by didactic expediency, took place. We can note that an integrative approach to the educational, communicative, and professionally oriented activities of students ensures the creation of such an educational environment that will contribute to the formation of professional communicative competence in foreign languages.

Keywords: pedagogical conditions, modeling, environment, competence, foreign language, approaches, training

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Introduction. To determine the optimal pedagogical conditions for the professional foreign language training of future engineers with the help of information technologies, we took into account the specifics of training, according to which the perfection of the formation of students' professional foreign language training depends on the following factors:

– the significance of the content of the educational material for future specialists;

– taking into account the interest in educational and professional activities and educational opportunities of students, as the productivity of professional training depends on their cognitive activity, peculiarities of thinking, memory and attention, ability to learn, the formation of communicative skills and abilities that are formed in the process of applying training exercises with the help of Internet technologies and encourage thinking and creativity;

– the effectiveness and quality of education, which depends on the frequency and volume of feedback and management of this process by the teacher and the optimal organization of the student's educational and cognitive activity.
In the process of professional growth of future engineers at universities of Ukraine, not only professional training takes place, but also the formation of the need and high motivation of students to master the profession, the desire to acquire professional skill, mastery, specialist culture, information literacy in the latest technologies, which is connected by the general concept of professional competence.

**Literature Review.** Scientists expressed relevant opinions regarding the clarification of the category of pedagogical conditions. Thus Bovill C., Marutschke D. M. and Kryssanov V. work in a certain situation or circumstance that affects (accelerates or inhibits) the formation and development of pedagogical phenomena, processes, systems, and personality qualities [1,5]. According to the method of influence on the learning process, pedagogical conditions

Having studied the specifics of competence-activity, cognitive-communicative, professionally and personally oriented, integrative approaches in language learning (I. Drozdova, N. Mykytenko, L. Morska, O. Moskalenko, L. Petukhova, Yu. Rybinska, etc.), we found out that their combination with Internet technologies will contribute to the optimization of the training process of future foreign language specialists, the formation of professional foreign language communicative competence in them.

Scientists (Zymnyaya I., Passov Yu., etc.) have proven that the motive of communication, capable of authentically evoking the desire to speak, arises only in a communicative situation. That is why the creation of professional speech situations creates motivation for statements. It is worth noting that the situation should be professionally oriented and contributed to the desire to express one's opinion in a foreign language.

**Materials and Methods** So, the subject of educational and learning activities, in our case it’s a future engineer, is under the influence of both external and internal pedagogical conditions that can promote or, on the contrary, inhibit educational and learning activities. Based on the definitions of the above-mentioned concept, we can offer our interpretation of the term "pedagogical condition" in accordance with the formation of professional foreign language competence with the involvement of information technologies – this is a certain set of elements of the educational environment - factors that contribute to the effective optimization of the learning process, the successful achievement of set goals.

Pedagogical conditions that contribute to the successful formation of the professional competence of a future engineer include:
- development of students' motivation to study foreign languages;
- formation of professional competence in a foreign language with the help of information technologies, effectively combining competence, cognitive-communicative, personally and professionally oriented, integrative approaches;
- simulation of real professional communication situations in the educational process;
– application of the most modern information technologies (computers, Internet, mobile communication, website, etc.) with the involvement of a developed professionally oriented system of exercises and tasks, implementing innovative teaching methods (project method, business and role games).

Development of motivation to learn foreign languages by future engineers. Motivation is one of the fundamental factors of the educational and teaching process in learning foreign languages, which contributes to the human need for communication, and is aimed at achieving the communicative goal in professional activity. With the development of any type of communicative activity, a transition to a new qualitative level of formation of its motivational mechanism is carried out.

In our opinion, introducing future engineers to the atmosphere of real professional communication in English or another foreign language is an effective means of achieving sustained interest in learning, which will ensure the development and consolidation of motivation. The decisive role in the development of students' motivation belongs to the teacher. Motivation does not arise spontaneously, and its successful maintenance is a sign of active activity and mastery of the teacher, who lays solid scientific foundations of the course, which in the future becomes an impetus for further work of students in mastering new knowledge.

It is important to select material that would interest future specialists and enable them to use the acquired knowledge, both in professional activities and in everyday communication (for example, strategies and tactics of communication, non-verbal means of communication). An important role in maintaining motivation is played by praise, moral and material encouragement, punishment, competition, etc. It should be noted that the communicative abilities and skills acquired by students in the process of learning dialogic communication in the presence of other people, especially native speakers, were realized better. Students mobilized all their knowledge to present themselves as professionally as possible in the presence of the guest.

The development of the motivation of future specialists is realized through the playing of professionally significant roles. Interesting roles caused motivational readiness of students for speech actions, aimed at forming the ability to mobilize learned speech material for communication for specific communicative purposes. The student's desire to participate in the educational and business game was determined by the presence of cognitive interest, the desire to increase one's authority, social needs (the desire for competence, achieving success, etc.), the need for self-actualization, etc. An effective way to increase the level of motivation is also the use of the project method in the process of learning dialogic communication. The main advantages of this type of activity are cognitive interest in a foreign language, the use of various forms of creative interaction, the application of knowledge in practice, the ability to cooperate, etc. In the process of such activity, motivation occurs, satisfaction with the activity and its result appears.

Formation of professional competence in a foreign language with the help of information technologies, effectively combining competence, cognitive-
communicative, professionally and personally oriented and integrative approaches. In the conditions of informatization of society and higher education, there is a growing need for competitive specialists who have the latest knowledge, possess the ability to combine and creative thinking, and know how to find their own ways to solve professional problems. One of the types of cognitive activity is communicative. However, learning foreign languages is the acquisition of a cognitive base and a structured set of mandatory sociocultural knowledge of a foreign-speaking society. In the teaching of foreign languages, the communicative approach [2] is considered a comprehensive approach, which considers communication learning as activity learning, characterized by the study of the cognitive activity of learning subjects, as well as problems of forming the knowledge system of those who study, that is, it takes into account the cognitive component [5;4]. Therefore, when defining the approaches, we primarily highlight the cognitive-communicative approach.

The purpose of the higher school is to prepare specialists to perform their professional duties on the basis of communicative competence. We directed the developed tasks and exercises for students to the formation of communicative abilities and skills in a foreign language using modern methods in working with a computer on the teacher's website, mobile communication. The professional specificity of future engineers involves the formation of advanced communication skills and skills in the process of learning a foreign/English language, taking into account the future activities of students, the development of high cognitive activity in order to obtain scientific, educational and professional information. Students are directed to analytical-synthetic activities, the ability to compare, classify, generalize, related to foreign language communication (business and role-playing games, the AKS method, etc.), where the cognitive-communicative approach is widely used.

Information processes in education will be carried out from the perspective of a competence-activity approach, the essence of which is that the updated content of education will be the basis for the formation of competencies (or a set of competencies) of students future engineers and the process of assimilation of the selected content will be activity-based. The formed competences are primarily multifunctional, because they are implemented in the education of students to solve professional tasks, apply socio-cultural experience, etc.; they are supra-subject and interdisciplinary; provide intellectual development of future engineers. The implementation of communicative goals is facilitated by the construction of the actions of the teacher and students, aimed at solving the following main tasks: a) the increasing use of proven and automated in the process of recognition, memorization and practice of educational material in communicative actions with the aim of obtaining information by specialty; b) active involvement of students in independent and active communicative activity, which takes place in oral and written form [6].

The study of the fundamental scientific ideas embedded in the development of this or that approach shows that the cognitive-communicative approach to teaching the Ukrainian language in higher education corresponds to the competence-activity,
methodological approach to education, which can be considered as a purpose-approach, an integrative approach. It makes it possible to theoretically substantiate the problems of goal-setting, selection of learning content, focused on the formation of various types of competences (communicative, socio-cultural, etc.), to solve the problems of organizing the selected content and the sequence of its study; to substantiate the issue of finding ways to practice educational material intended for assimilation by students, taking into account the professional, communicative and cognitive needs of students of various courses in relation to educational conditions [11].

The systematization of aspects of communicative-active, communicative-cognitive approaches and additional methodical principles existing in the methodology and their interpretation in the conditions of new requirements for learning according to the new paradigm of language education allows to clearly outline and systematize a professionally oriented approach to the formation of professional foreign language competence of students in engineering in real conditions of professional activity. The success of professional foreign language communication depends on the speaker as an individual, his acquisition of professional foreign language competence as the basis of professional communication with foreign partners, the ability to translate information into text and professional discourse depending on the purpose, language situation, etc. So, the components of professional communication are: personal factors in professional communication; text or discourse (a coherent text in unity with extralinguistic pragmatic, sociocultural, professional and other factors) as a linguistic embodiment of information during professional foreign language communication. A foreign language text is an important component of the content of foreign language learning, because in the process of working with authentic sources, not only lexical, phonetic and grammatical skills and communicative skills are formed, but also language, speech, intercultural and other competencies [12]. Thus, the forms, methods and methods of experimental training we have determined are aimed at effectively solving the tasks of future road and road tourism engineers in professional foreign language activities, which provides a professionally oriented approach.

Modern pedagogical technologies, such as collaborative learning, project methodology, the use of new information technologies, Internet resources help implement a personally oriented approach to learning, provide individualization and differentiation of learning taking into account students' abilities, their level of education, inclinations, etc. A personally oriented approach involves taking into account the personality of the student, his abilities, professional interests and directions and cognitive activity, which is provided with the help of individual forms of work, both can be traditional and innovative.

The combination of various types of activities of the future engineer consists in the integration of such types of activities as educational, communicative, and professional, which complement each other and thus create conditions for the
formation of professional competence. For better understanding of the essence of the integration process, let's analyze the concept itself and its components. Depending on the field of research, there are many definitions of the concept of "integration".

**Modeling in the educational process of real professional communicative situations with the help of information technologies.** Training future engineers for foreign language communication is impossible without the use of modeling situations of their future professional activities. Modeling consists in reproducing the content of any professional activity of a person and the content of relationships between people during the performance of this activity. The peculiarity of professional communication situations is their two-faceted nature: firstly, they should have professional significance for future engineers, satisfy their cognitive interest in professional training at universities, and secondly, they should be able to reveal and implement their communicative skills in a foreign language, which are necessary in further activities.

Modeling of professional situations takes place on the basis of educational and speech material, distributed in the form of problem situations that transfer students to the real conditions of their professional activities. Functionally, this simulation can replace the real process of communication and can be the basis for teaching communication, as it makes it possible to set its goal more clearly, reproduce conditions adequate for speech, and take into account all the parameters of a real system of professional communication.

In our study, modeling of communicative situations is carried out in accordance with the real process of foreign language communication and is considered as a set of actions leading to speech interaction between communicators and aimed at practicing speech skills.

The main characteristics of communicative situations of professional communication are modeling situations that are as close as possible to the real professional process of communication; role positions of communicators; use of professionally oriented material in the process of communication; observance of speech culture. Simulation of situations is carried out using game technologies in the educational process of a higher educational institution. It is the involvement of students in game activities that allows them to form not only theoretical knowledge and practical skills, but also to contribute to the formation of professionally important qualities in them, necessary for the performance of future work activities. The professionally oriented system of exercises and tasks to ensure the complex and step-by-step formation of the professional competence of future engineers involved the use of information technologies like websites, applications and training programs.

**Application of the most modern information technologies (computers, Internet, mobile communication, website, etc.) with the involvement of a developed professionally oriented system of exercises and tasks, implementing innovative teaching methods (project method, business and role-playing games).** The computer, providing an individual approach to students, is at the same time a stimulus for
collective creativity. Participation in joint projects for the creation of thematic publications, databases, websites in the language being studied teaches joint decision-making. The way of introducing Internet technologies into the process of learning a foreign language is the way of creating new teaching methods based on the synthesis of basic methods and the realization of computer literacy of the teacher [16]. An important method of step-by-step formation of communicative abilities and skills in a foreign language in professional activity is a specially developed system of exercises and tasks, the didactic material for which was accessed in accordance with the stages and purpose of experimental training with gradual complication of tasks.

**Conclusions** In solving the problem of motivation in the process of teaching communication, the teacher must take into account two main aspects: the creation of students' needs and interests, which ensure the activity of their cognitive activity, and the influence of motives on the mechanisms of the generation of foreign language speech. To increase students' interest in learning a foreign language, we took into account such factors as the novelty of the learning material; the teacher's personality and methodological techniques used by him; students' awareness of the practical need for knowledge of a foreign language, form of education.

Within the framework of our research, integration is based on a harmonious combination of educational, speech, communication and information technologies in the pedagogical system with the aim of forming the professional foreign language competence of students future engineers. The implementation of this condition took place at the stage of choosing the educational material, the tasks in which were selected according to the principles of speech direction, communicativeness, professional orientation, and didactic expediency.

Scientific investigations of educational and methodological support and sources revealed that, for the most part, textbooks and manuals meet the requirements of professional and communicative training of students. However, the textbooks lack tasks and specialized texts, there is an urgent need to apply informational methods of working with the text using the teacher's website, training programs and applications, exercises to develop skills and communication skills are performed with great interest if Internet technologies are involved. It was established that due attention is paid to the problem of professional communication, but there is no holistically justified system aimed at comprehensive communicative training of students future engineers.

Therefore, the formation of professional foreign language competence of students on taking into account during the creation and implementation of a complex of pedagogical conditions, that is, a set of factors necessary for the functioning and change of the pedagogical system.

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Література:


