Psychological and pedagogical foundations of the project technology

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Abstract.
Both psychological and pedagogical foundations of the project methodology of teaching a foreign language were determined in the article. It is underlined that learning a foreign language at technical universities is quite successfully possible only on the basis of creative development of imaginative thinking of students using the project method.

Keywords: project creativity determine prerequisite foreign language imaginative thinking
The development of communicative competence skills of higher education students of engineering specialties on the basis of project activity takes place in the process of their formation as individuals and requires mandatory consideration of psycholinguistic properties of the mechanisms of foreign language speech, communication thinking and speaking in the process of communicative interaction of speakers.

Learning a foreign language is quite possible on the basis of creative development of imaginative thinking of students using the project method, their own attention, memory, ability to see facts, compare them, analyze, synthesize, generalize, specify and abstracting, that is, on the basis of one's own reflection of reality, since all human activity is currently project-based by means of a foreign language and is formed on a psychological basis. At the same time, it is mostly logical to consider psychological and pedagogical principles of the use of project methodology taking into account the specifics of foreign language as a subject for teaching a foreign language to engineering students. The analysis of psychological and pedagogical scientific works gives reason to do the conclusion that the implementation of the project methodology of teaching a foreign language is especially relevant in senior years. This is explained by psychological features inherited in students as subjects of a certain age group [1].

Researches on age psychology and pedagogy show that mental development and the formation of students' personality is characterized by certain changes in emotional, regulatory and cognitive spheres, and sometimes there is a desire and the ability of students, especially senior ones, to express themselves, their self-assertion and independence in learning. In the context of professional self-determination and self-awareness in senior students renewed interest in learning a foreign language. These researches showed the following psychological and pedagogical prerequisites for the implementation of the project methods of teaching foreign languages at technical universities:
- complex learning motivation;
- focus on the specifics of students' professional specialization;
- personal and active approach to learning;
- difficulty and individualization of education.

Methodological prerequisites of the project methodology of teaching a foreign language were determined as the following:
- communicative orientation of foreign language learning;
- interconnected learning of all types of speech activity;
- integrative nature of foreign language learning, which involves knowledge,
- skills and abilities of students in other educational subjects.

Empirical studies underline that learning a foreign language by students of technical higher school is associated with difficulties to be primarily of a socio-psychological nature. On the one hand, status of the foreign language significantly increases the motivation to study it. In addition, in recent years, there appeared a trend towards earlier awareness by students of the importance of acquired knowledge for further successful professional growth. Thus, the project methodology is an effective development of critical thinking.

One of the main goals of learning a foreign language, when using project technology in non-language (technical) university is to master all components of a foreign language communicative competence, which becomes the main condition for implementation of intercultural communication in general. From here comes that the object of learning a foreign language is foreign language activity as the most important means of intercultural interaction in general. Senior students want to see a direct connection of acquired knowledge of English with their future professional and personal life. As a result, it seems impossible to communicate with students of senior courses of non-philology (engineering, natural sciences, and others), which mostly already have an experience in their future professional activity, only as with objects of educational activity. In this case, the optimization of the educational process is facilitated by involvement students to participate actively in the organization of educational activities with the help of innovative technologies, namely
the project one [2].

In the senior years, any student is actively developing on the basis of reflection his own self-confidence, the image of "I", correlation between real and ideal "I". This age is characterized by the maximum development of physical and psychological authorities, greater mental functions: perception, thought, memory, respect, emotions and feelings, as well as development of professional movement.

Then before students there stand the tasks of social, professional- special self-appointment, which convey a clear orientation and appointment of their position in the profession and the support, which cause the need for the development of self-confidence, developing a worldview and stable life position.

The basis of scientific research in order to develop communication skills of students of engineering specialties made up ideas of psychological significance (M. Dobrygin, C. Rubinstein), personal content (O. Leontief); personality personalization (Petosky); leading (Davydov O. M. Leontief, D. Elkonin) and determining (V. Mukhina) types of activities, fundamental theories of personality and activity: about integral characteristics personalities (B. Ananiev, L. Boscovich, O. Kovalev, V. Myasishchev, K. Platonov); about mechanisms of personality personalization and its development in activity (K. Abulkhanova-Slavska, L. Buena, O. M. Leontief); on mastering activities (L. Vygotsky. Davyдов, P. Halperin, N. Talizina) and its subject (B. Ananiev, O. Samoilov, S. Rubinstein); on the unity of theoretical and practical thinking (S. Bachfisches, O. Brusilovsky, O. Matyushkin, B. Teplov, H. Kostiuk); about individuality and its development in activity (E. Klymov, B. Merlyn, B. Teplov). Together, they allowed to determine the specifics of modern education, in particular the use of project education method of teaching foreign languages to technical students, new orientations of society, regarding the professional training of an engineering specialist, to substantiate theoretically the conceptual model of project activity with the purpose of developing the communication skills of engineering students in the field of foreign language education to formulate the principles of a new didactic system based on the sign
methodology, determining the conditions and limits of its optimal application.

Psychological and pedagogical foundations of the use of project methodology with taking into account the specifics of foreign languages as a subject in higher education of the technical direction are based on the following provisions:

- role of a foreign language as a subject in modern education system;
- specifics of foreign language learning for engineering students university specialties, main goals and objectives;
- use of project methodology taking into account the specifics of training of a foreign language in higher education.

The system of classroom and extracurricular work in the higher education institution for all educational disciplines should be aimed at solving the specified tasks. A foreign language is an active educational subject that has an educational, and developmental potential that creates a solid foundation for formation an intelligent person. The main component of the scientific-theoretical and practical basis of project work is motivation, the other most important component is considered to be an active, personally oriented approach, as well as communication, cultural and educational competence. Project activity contributes not only to broadening one's horizons, but also forms students' critical thinking skills. Students cease to be passive recipients of knowledge. They actively participate in the process of learning by asking questions and finding answers to them. With the project technology of training students don't just receive information, they process it, compare sources, analyze facts, highlight important and minor, establish causal relationships. Knowledge does not become finite, but the starting point, the basis for reasoned and logical thinking, which based on personal experience and verified facts.

Formation of critical thinking at project technology in the period of expansion of information space acquires special relevance. It allows to achieve such educational goals results as the ability to work with information flow in various fields constantly increasing and regularly renewed knowledge, the
ability to express thoughts (verbally and in writing) clearly, convincingly produce own opinion based on understanding various experiences, ideas and perceptions, the ability to study independently (academic mobility), the ability to cooperate and build constructive relationships with other people.

The modern Ukrainian higher technical school faces tasks related to create conditions for intellectual, spiritual and moral development of students, to train an intelligent person, to educate future specialists in the needs of self-education and self-development, for the formation of students with a broad and humane view of the world. Therefore, the main goal of learning a foreign language basing on psychological and pedagogical foundations of project technology in non-language (technical) university is to master all components of a foreign language communicative competence, which becomes the main condition for implementation intercultural communication in general.

References: