

## Psychological and pedagogical bases of using the project-work method to teach foreign languages at higher technical educational institutions (HTEI) of Ukraine

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**Abstract.** The article deals with the main psychological and pedagogical bases of using the project-work method to teach foreign languages at higher technical educational institutions of Ukraine. The emphasis is put on the necessity to form students' critical thinking and it is also underlined that the system of developing the skills of communicative competence of HTEI students accounts for their individual peculiarities, the level of their cognitive abilities, professional motives and interests, and the features of their future professional activity.

**Key words:** *psychological and pedagogical bases, project-work method, critical thinking, activity, communicative.*

**Introduction.** Development of skills of communicative competence of students of higher educational institutions of engineering specialties based on project activities is performed in the process of their personality becoming and provides for compulsive consideration of psycholinguistic properties of mechanisms of foreign language communication, the link of thought and speech in the process of communicative interaction of speakers.

Studying a foreign language is possible only through the development of students' creative imaginative thinking, using design techniques, attention, memory, the ability to see facts, to compare, to analyze, to synthesize, to summarize, to specificate and abstract, that is based on one's personal reflection of the reality, since all human activities, which are currently reflected by means of a foreign language, are formed on a psychological basis.

Thus, the most logical thing is to examine the psychological and pedagogical principles of using the project method, taking into account the specific character of foreign languages as an educational subject for teaching a foreign language to students of engineering specialties of HTEI.

**A brief review of publications on the subject.** The goal of developing skills of communicative competence of students of engineering specialties allows making up the ideas of psychological significance (M. Dobrynin, C. Rubinshteyn), personal content (O. Leontyev), personalization of the individual (O. Petrovskiy), the leading (V. Davydov, O. Leontyev, D. Elkonin) and determining (V. Mukhina) activities, the fundamental theory of the personality and his/her activities: on integrated personality characteristics (B. Ananyev, L. Bozhovych, O. Kovaliov, V. M'yasyshev, K. Platonov); on the mechanisms of personalization of the individual and his/her development when carrying out activities (K. Abulkhanova-Slavskaya, L. Buyeva, A. Leontiev); on assimilating the activity (L. Vyhotskiy, V. Davydov, P. Halperyn, N. Talyzina) and its subject (B. Ananyev, O. Asmolov, S. Rubynshteyn); on the unity of theoretical and practical thinking (S. Batsychev, O. Brushlinskyi, O. Matyushkin, B. Teplov, H. Kostyuk); on the personality and his/her development when carrying out activities (E. Klymov, B. Merlin, B. Teplov).

On the basis of study review of age-related psychology and pedagogy there were identified the following psychological and pedagogical prerequisites for implementing

the project method of teaching foreign languages at higher educational institutions:

- complex learning motivation;
- focus on the specific professional specialization of students;
- personality and activity approach to learning;
- difficulties and individualization of learning.

Using methodological prerequisites of the project method of teaching foreign languages, there were determined its common characteristics such as:

- communicative focus on teaching a foreign language;
- interconnected teaching all kinds of communicative activities and integrative teaching a foreign language, which involves knowledge, skills and abilities of students in other subjects.

Empirical studies show that learning a foreign language by students of technical specialties of higher educational institutions is connected with difficulties that are primarily of social and psychological character. On the one hand, the status of English significantly increases the motivation for studying it. In addition, in recent years there has been a trend to earlier students' awareness of the importance of acquired knowledge for further professional growth.

**The purpose of the article.** The purpose of research is to determine the psychological and educational foundations of using the project method, taking into account the specificity of foreign languages as an educational subject at HTEI of Ukraine.

**Materials and methods applied.** Psychological and educational foundations of using the project method, taking into account the features of foreign languages as an educational subject at HTEI, are based on the following assumptions:

- the role of a foreign language as an educational subject in the modern educational system;
- the specific character of teaching a foreign language to students of engineering specialties, the main goals and objectives;
- the project method application, taking into account the specific character of teaching a foreign language at higher educational institutions.

The scientific-theoretical and practical basis for project work, as well as its main component is motivation, the other essential components, that should be considered, are the activity component, the learner-centered approach and

communicativeness, the culture and academic competence.

The project activity contributes not only to enlarging one's scope, but also to developing students' skills of critical thinking. Students are no longer passive recipients of knowledge. They are actively involved in the studying process by asking questions and finding answers to them. Students do not just obtain information, but they redesign it, compare sources, analyze the facts, specify the issues of primary and secondary importance, and establish the cause and effect relationship. Knowledge does not become the final, but the starting point, as well as the basis for reasoned and logical thinking based on personal experience and proven facts.

Critical thinking developing during the expansion of the information space is of particular relevance. It makes possible to reach such educational outcomes as the ability to work with a flow of information in different areas of knowledge that is constantly enlarged and regularly updated; the ability to express one's views (orally and in the written form) clearly, decisively and correctly; the ability to form one's own opinion based on the understanding of different experiences, ideas and perceptions; the ability to solve problems; the ability to independently engage oneself in (academic mobility) self-education; the ability to cooperate and create the constructive relationship with other people.

Project work allows creating the environment necessary for full study of a foreign language, a professional foreign language for the purpose of forming global thinking, development of personal activity that is of particular relevance during the transition to the European educational system that sets new challenges to the educational science and practice and widely implements in the teaching process the project methodology - one of these technologies.

The basis of critical thinking is made up of a three-level process: challenge - understanding the contents - reflection. At the stage of the challenge the first step is an idea formed by the person: what does he know and want to learn? At the stage of understanding (implementation of the content), the person answers the previously posed questions. At this stage they study and handle the information. At the stage of reflection the student thinks over and generalizes the information gained while studying a particular problem.

Thus, the project method is an effective tool for critical thinking development. In order to help students perceive the foreign language as a means of intercultural interaction it is necessary not only to acquaint them with the regional subject, but also seek the ways to involve them in an active dialogue of cultures, so that they could practically learn the peculiarities of the language functioning within a new culture for them [5, p. 25].

The basic idea of this approach to learning a foreign language at HTEI, therefore, lies in shifting the focus from various types of exercises on students' mental active performance, which, in turn, requires mastery of certain linguistic means.

In the process of teaching a foreign language at higher educational institutions of Ukraine the personality oriented project training is of particular importance due to the following reasons:

1. Organization of foreign language teaching, taking into account the psychological characteristics of students as adult individuals (17-18 and over), as the psychopedagogical analysis reveals, has its specificity, consideration of which can raise the quality of the process of teaching a foreign language at a higher educational institution in general, and promote the development of HTEI students' skills of communicative competence based on the project methodology, as well as the creation and professional growth of the individual specialist in accordance with the modernity requirements.

Along with the competency and activity approach the student is considered to be an active subject of educational interaction with independent organization of one's own activity, which is inherent in the specific orientation of cognitive and communicative activity aimed at addressing specific professionally oriented tasks, the main mode of teaching students is the semantic-context one [2].

A system of skills development of HTEI students' communicative competence accounts for their individual peculiarities, the level of their cognitive abilities, professional motives and interests, and the specificity of their future professional activity, understanding the essence of mental processes that are fundamental for communicative activities.

An important aspect of professional formation, that is the future specialist of the engineering industry, is the realization of an individual approach to the student's personality in teaching foreign languages at higher educational institutions, which accounts for knowledge as age-related, personality factors, as well as special characteristics of the intellectual potential of those who seek to acquire high-quality knowledge and practically implement them in the process of professional communication.

2. The specificity of the students' social position and status supports the enhancement of their mental activity and the increase of their degree of independence. Conscious professional identity of students will play a significant role in the educational process. On the one hand, as a rule, students self-identified themselves professionally while studying at school, college, gymnasium, and lyceum (independently or under the influence of their parents), at work, military service, etc.

One can, therefore, say enough about a conscious choice of a future professional activity by a socially mature personality, a person responsible for his/her own actions and behavior, and adequately regulates one's own behavior.

On the other hand, they have not yet mastered the demands of the future profession in a wide range of prospects for their professional creativity and identification search, including the project activity; they have not found out the conditions for achieving professional and career success, the opportunity of self-development and self-actualization within their profession.

3. Senior students of higher educational institutions on the basis of reflection actively develop their own self-consciousness, self-construction, the ratio of the ego identity and ego ideal.

The student age is characterized by maximum development of physical and psychological features, higher mental functions: perception, thinking, memory, attention,

emotions and feelings, as well as the development of professional communication.

This is the best time for learning and training, as well as for the formation of one's individual style. The main feature of the student age is awareness of identity, self-development and personality self-actualization, development of outlook and self-construction.

4. Students face the challenges of social, professional and personal self-determination, providing for clear orientation and defining one's own place both within the profession and the society that in turn has caused the need to develop self-awareness, an outlook and a stable approach to life. [9]

The human professional potential development of a specialist has some levels and is the result of active cooperation of a student's personality with socio-professional groups and means of labor as well as with his mind enrichment, which can be considered to be the functional growth.

The leading factor in the professional development of the student's personality is a system of objective requirements determined by specifically organized (training) activities, which course new properties and qualities, extremely important for the implementation of project activities.

The psychosocial culture of the engineer is understanding and consideration of the consistent patterns and functioning of the expert of the psychosocial system. An engineer is a socio-technical profession, 50% - interacting with others, 50% - working with the technology. Hence, there is the need for the engineer's psychosocial culture formation, which includes responsibility for people who are in hand.

In this connection, 'Foreign Language' subject has a significant educational potential for the social competence formation of future engineers that is the essence of the social phenomenon of 'language' with the main function of communication.

Project work is an important tool for learning a foreign language, motivation developing.

The motivation is the basis of a foreign language learning in higher educational institutions, which includes speaking process specialization (profession language and terminology knowledge in the implementation of project activities, etc.) and the teacher's personality, which mainly influences the intensification, advisory and coordinating functions of the educational process (accelerated development of receptive and reproductive skills of students' communicative competence in technical universities based on the project methodology).

Motivation is defined as a system of various incentives, including the needs, goals, interests and emotions. The development of cognitive motivation provides students' overcoming the difficulties in the classroom, causes their cognitive activity and initiative. The advent of cognitive motivation changes the psychological processes of perception, memory, thinking, affecting the efficiency of the learning process.

The motivation formation to the researched object is the necessary process. This is especially true for foreign language studying at the non-linguistic faculty, because language is not a profiling subject and it is not given enough time. Motivation positively affects all psychologi-

cal processes of a person - attention, perception, memory, thinking, imagination.

Attention appears with the person's interest, in the educational process particularly. Interest is one of the most effective determinants of attention. The perception of educational material depends on whether cognitive needs are formed or not. An important role is played by the instruction that helps to perceive the material accurately.

Researchers say that thinking is governed by a system of active relations of the subject to the object, expressed in the mental activity motivation [1; 3].

Cognitive motivation is the most important for learning activities. In foreign language mastering cognitive motives are aptly differentiated, there are several important of them in particular:

- the interest for the language promotes motives to the analysis of linguistic phenomena, the development of linguistic thought;
- the ability to use the language as a means of information exchange, receiving of knowledge, particularly professional.

The development of motivation largely depends on the means and methods used by the teacher who organizes the activities of students. Using certain conditions under which the process of learning becomes more interesting and leads to the knowledge mastering and motivation development.

It is necessary to develop common motivation for language learning. Students need to see and understand how foreign language is important in their life - that is communication with students from other countries and getting acquainted with the culture of other nations.

But motivation for the development of the activity is not enough, so it is important to develop professional motivation.

Students of technical (engineering) specialties of Ukrainian universities are focused on their future profession; their interest is associated with manufacturing, technology and equipment. Therefore, one of the major reasons of students' studying success is an interest to the information about their specialty. This interest is linked to the need for future careers.

To develop motivation, the projects, the students work on, must have the following characteristics:

- 1) content relevance;
- 2) novelty;
- 3) variety.

Foreign material studying, problems discussing in the project should be relevant to students, not random or abstract. The novelty of the material is an essential prerequisite for interest and cognitive motivation creating.

However, the new material should be based on existing knowledge. Teaching material should be characterized by a certain variety, which is achieved by using different techniques and methods at the classes and beyond them, especially when working with a variety of educational texts is used in project activities. For example, reading, translation, dialogues role-playing, discussion, listening and so on. In addition, the texts relating to various processes, environmental phenomena, various professional tasks in a foreign language solving are expected to be studied.

So, novelty, relevance and the content variety of the foreign language texts is a necessary condition of interest and need for students' speaking and mental activity, motivation in project activities.

As to a foreign language teacher, there arises a pedagogical and psychological problem of the original creation, formation or preservation of the student's existing needs to communicate in a foreign language and to know this language, to form professional settings, to create a terminology database by means of the foreign language for specific purposes.

According to the author of this study, there are the most important factors that contribute to the internal motivation of speaking activity formation at project studying.

- project ideas connection to real life: the idea of any project must be associated with the creation of a particular product or a particular solution, a significant problem for the student taken from real-life practice in the profession;
- interest availability in the project performance of all its members: in the process of the project methodology using, it is very important to achieve the personal idea of project accepting and real interest arising in its realization, which will provide its successful implementation and effectiveness of the educational impact;
- the teacher's leading role in consultative function: the transition from leading positions to the position of an adviser and / or the coordinator, by giving learners the real autonomy and opportunity of their own initiative and autonomy displaying in the project implementation, that contributes self-identity.

Psychological diagnostics, acquired linguistic and age characteristics of students, in particular, play an extremely important role in the practical implementation of the communication method through the method of "projects".

According to the results of this diagnostics, communication organization on the lessons of spontaneous and prepared long-term projects implementation is realized.

A new role of the teacher, his emotional mood, ability to find a contact with students based on trusting and their ability to communicate in a foreign language should be emphasized and students will feel their importance and their 'important' role in the implementation of 'A Project'. Dale Carnegie said: 'Convince your interlocutor in his significance'.

In preparation for the lessons with the realization of a 'domestic' or - on the undergraduate courses - 'professional' project, a teacher should think about the moments of relaxation and be able to react to unforeseen situations in the classroom.

**Results and discussion.** The development level of the future specialist's creative potential affects not only his profession, but also the process of his life, as a means of self-expression through self-affirmation and self-development.

It should be mentioned, that in different kinds of a person's activity (cognitive, philosophical, communicative

and emotional) and project activities, in particular, his creative essence- searching and transforming orientation- is preserved: [6, p. 76-82; 7, p.115; 8].

In our opinion, this surely affects the student's development of communicative competence skills in English language learning by the method of projects in high technical educational establishments.

In addition, the importance of a creative professional specialist forming by means of a foreign language is characterized by such values as: social, because there appears not just a new person with special mentality, capable of radical changing and transformation, but a specialist of a new form, which is attached to the progressive changes in the society; scientific, because he serves as a means of creative abilities knowledge in the field of intellectual and social creativity [6, s.76-82].

Thus, communicative literacy is also of great importance - a set of a person's communicative knowledge and skills, allowing him to communicate effectively orally and in a writing way; knowledge of the laws, rules and means of effective oral and written communication [4, s.328].

**Conclusion.** The practice of foreign languages teaching in technical universities has shown that the implementation of the project technology in foreign language learning contributes greatly to the atmosphere of a collective dialogue, organized on the basis of communicative situations that are the basis of the 'project work'. This encourages students to communicative and motivated speech acts, and communication in these situations allows them to learn a foreign language active material.

Such situations are emotionally colored, have a sense of satisfaction, interest in joint activities, providing conditions for success both in the preparation and the implementation of long-term and spontaneous projects.

Experience shows that the development of communication skills is possible only through solving real problems in the classroom, causing students' self-confidence, helping to overcome 'psychological barrier' and developing a desire to 'speak' a foreign language.

So, based on the main goal of a high school - the formation of professionals and creative person, able to think and act globally and humanely, creativity is considered as integral, professionally significant quality, appearing in intellectual, speech, occupational and social sectors without which the project work by means of a foreign language is impossible.

The development of creativity allows realizing a high-quality professional project work, helps a specialist to reach the highest level of perfection, promotes self-development and self-actualization (among which the priority is given to the development of spirituality, intellect, will, language and speech improvement, formation of professional qualities, etc.).

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**Психолого-педагогические основы технологии использования проектной методики в обучении иностранным языкам в технических ВУЗах Украины**

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**Аннотация.** В статье рассматриваются основные психолого-педагогические основы использования проектного метода обучения иностранным языкам в технических учебных заведениях Украины. Акцент делается на необходимости формирования у студентов критического мышления, а также подчеркивает, что система работы по развитию навыков коммуникативной компетенции студентов ВТУЗ Украины предусматривает учет их индивидуальных особенностей, уровня познавательных возможностей, профессиональных мотивов и интересов, специфики их будущей профессиональной деятельности.

**Ключевые слова:** психолого-педагогические основы, метод проектов, критическое мышление, деятельность, коммуникативный.