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## THE CREATION OF PROBLEM-BASED SITUATIONS IN TEACHING FOREIGN LANGUAGES AS ONE OF THE WAYS OF STIMULATING STUDENTS' CREATIVE THINKING

**Abstract:** *The article deals with the importance of a foreign language for the formation of general cultural and professional competences of students of technical higher educational institutions. In the process of teaching a foreign language to students it is possible to solve many problems associated with the formation of the future specialist, such as the development of cognitive activity, stimulation of creative activity, the formation of certain professional competencies, etc. One of the effective ways to solve these problems is to create problem-based situations in the classroom. Acquiring the experience of solving problems, students learn and develop thinking strategies in the process of independent gaining new knowledge.*

**Key words:** *professional competence, speech-making activity, problem situation, creative activity, difficulty, problem solving.*

**Language:** English

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### Introduction

It is well known that the study of a foreign language has a humanitarian impact on the student's personality, forms his international experience and activates his mental activity. In the process of learning a foreign language, many problems associated with the formation of the future specialist, such as the development of cognitive activity, stimulation of creative activity, the formation of certain professional competencies; ability to communicate can be solved. Communication is considered one of the main forms of social activity. In scientific understanding, communication is the interaction of people (the impact of people on each other and their response to this impact), the exchange of information in this interaction, the development of a unified strategy of interaction, the perception and understanding of the partner [1, 94].

The changed requirements to a specialist put forward by modern society has caused the changes in the methods of teaching foreign languages. These methods base on the understanding that routine education should be replaced by active learning, which is characterized by the following features: its results can be used inside as well as outside a concrete learning situation; learners develop a deep understanding of a discipline studied; the knowledge could be transferred to other fields and learners are able to reflect on their own learning process [2, 105]. Teaching is viewed as a balanced two-ways interaction between the one who teaches and the one who learns. Thus, the teacher is to create conditions for the best learning and focus the teaching of a foreign language in such a way that students could communicate consciously, taking into account their real experience.



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As the language is a means of interaction and relationship within society, the ability to communicate is a prerequisite for the establishment and development of successful professional and personal contacts both in the society within the country and at the international level. The process of foreign language communication is important because students not only acquire foreign language and culture, but they can use their knowledge in constantly arising and changing situations, be prepared to enter into dialogue with teachers, foreigners, each other, future colleagues, the audience, employers, etc. Effective communication develops skills that are necessary for future graduates and are demanded by employers; these skills contribute toward positioning graduates as the citizens of the world.

### Materials and methods

Communicative approach to language teaching makes use of real life situations that stimulate speech-making activities. It is also well known that the involvement of students in the activity situations and encouragement of their speaking contributes to the solution of many both professional and personality problems [3, 243]. Communication arises if the main motives of interpersonal interaction are taken into account, namely:

1. implementation of joint activities (in the process of communication);
2. influence on the interlocutor;
3. satisfaction of emotional needs in communication.

As a rule, communication in a foreign language class occurs in connection with the implementation of joint activities. The process of involving students in joint speech activity can go several ways:

1. the teacher formulates the problem and solves it together with the students;
2. the problem is formulated by the teacher and students solve it on their own;
3. students themselves put forward the problem and solve it.

However, the activation of the speech task is hardly possible without the correct formulation of the problem, when the main issues to be solved are: Why? What for? How? In other words, a problem situation is created and the problem for solution arises [4, 557]. The Collins English Dictionary gives the following definition of problem solving "Problem solving is the act or process of finding solutions to problems, esp. by using scientific or analytical approach" [12].

Research on learning suggests that students may approach learning in two qualitatively very different ways: through a deep approach, in which they aim to understand ideas and seek meanings and try to relate new things to the existing knowledge, and through a surface approach, in which they see tasks as being

imposed on them and they study without reflection on purpose or strategy. Problem-based learning provides a context within which a deep approach is indispensable [11, 1].

There exist different interpretations of this concept in the works of well-known teachers and psychologists, but we stick to definition of the problem situation as "some difficulty or unanswered question the person is vaguely aware of and its overcoming requires a creative search for new knowledge, new ways and actions" [6, 7]. A broader understanding of the problem situation involves taking into account all the data needed to solve it identifying the specific components of the problem situation – the conditions for the formulating of the problem, the presence of the unknown (problem), the process of problem solving and the presence of the object of action.

Despite the complexity of the concept, it should be noted that many issues related to the development of problem situations in the study of fundamental disciplines are studied well. Problem solving in teaching a foreign language still requires consideration. We think that Professor V.I. Vergasov was right saying that there is no subject where the use of problem solving would be impractical or impossible [7, 23]. The problem - based approach in teaching, which is based on the heuristic method of conversation, involving bewilderment, reflection, search, should be used in a foreign language teaching, although it has its own peculiarities. The problem situation in a foreign language teaching is considered as a "specific type of a foreign language pedagogical communication" [1, 196]. The specific feature of the communication in this case is attributed to the originality of the approach to the content and organization of educational material and the problem situation is due to the contradictions between:

1. existing knowledge and requirements that arise in the course of solving the problem;
2. the established ways of using knowledge and the ability to apply it in new practical conditions;
3. a variety of choices from the knowledge base and the problem solving framework.

Problem situations in a foreign language teaching can be different in complexity. Some of them involve identification and awareness of the phenomena of language; others have an extra linguistic and professional basis.

When determining problems, the teacher should remember that interesting, motivating, taken from real life problems stimulate students to make decisions or judgements based on facts gained from different information sources. Gathering information from a wide range of sources allows students to see how knowledge becomes a useful tool for problem solving. A good problem affords feedback that allows students to evaluate the effectiveness of their



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knowledge, reasoning and learning strategies. The problems should also promote conjecture and argumentation. Problem solutions should be complex enough to take into consideration many interrelated pieces and should motivate the students' need to know and learn [8, 121].

The problem solution, as a rule, begins with an understanding of the relationship of the task with its linguistic implementation. Situations of this type are based on the tasks known in psychology as tasks on intelligence, development of imagination, attention and memory, mental comparison operations, classification and analysis. Interest arising because of the unexpected situations appearance and the resulting difficulty are important elements of learning and understanding of the foreign language phenomena.

A necessary condition for creating and solving problem-based situations of communication in a foreign language is to take into account the level of learners' knowledge, goals and objectives of training and the feasibility of solving a particular problem. Gifted students tend to be highly motivated and have the cognitive skills that allow them to be confident in tackling any complex task. Determining a problem for less skilled students requires the consideration of their level of knowledge. It is of importance to understand that the problem appropriate, interesting to bright students, may be challenging and overwhelming for others [3, 241]. At the elementary level, the tasks are determined by the nature of lexical and grammar material to be learned. The problems raised relate to the difficulties of a lexical or grammar nature and the need to interpret them. At this stage it is important to pay attention to the development of students' observation, intelligence and imagination – qualities necessary not only for language learning, but for any other activity for the formation of professional competence.

At the initial stage of training, it would be possible to recommend such assignments as:

1. comparison of the original objects and finding differences between them;
2. recognition of the object according to the specified options (properties, etc.);
3. definition of the relationship between elements of the situation and possible actions of learners;
4. interpretation of verbal riddles (riddles – interpretation, riddles – descriptions, riddles – contrasts, riddles – metaphors);
5. participation in associative games and others.

Many of the proposed tasks require, however, certain students' skills to transfer existing knowledge from one situation to another. Sometimes a person has knowledge and skills of the kind, but he/she can get confused when circumstances change and he/she is not be ready to use the available initial data for overcoming of the arisen difficulty [10, 112]. In

other words, the person is not able to create and does not possess such features of creative activity as:

1. the vision of the structure of the object;
2. independent transfer of knowledge and skills in a new situation;
3. vision of new problems in familiar standard conditions, ability to ask questions;
4. vision of a new function of a familiar object (language unit);
5. vision of an alternative solution, alternative approach to finding a solution;
6. combining previously known methods of solving the problem in a new way;
7. creating original ways of solving the problem while knowing other ways.

The above features of creativity reflect the original vision of the studied material, the ability to analyze and synthesize the knowledge acquired earlier during the process of training. At the same time, creativity in the foreign language classroom has its own specific features, which is explained by the peculiarity of the studied discipline. Since a foreign language proficiency is both a goal and a means of cognition [1, 200], creativity in teaching a foreign language involves not only the ability to critically compare the previously obtained information with the new one, but also the ability to express new knowledge by means of the studied language. Creating a problem situation is an impulse that gives rise to creative activity. When the question is formulated, the learner has unconscious difficulty and its overcoming requires new knowledge, new skills. Bewilderment, surprise, interest and contradiction appear, thus involving the student in the process of thinking and communication. It is important for the teacher not only to realize the need for certain changes in the structure of students' mental activity, but also to design a methodical system of emerging issues, adapting it to the specific tasks of the educational system process and formation of professionally significant competences of the future specialist.

It should be emphasized that the creation of communication situations based on extra linguistic and professional problems is one of the most relevant and effective ways for the development of professional competencies. The situations of this kind allow the students to see not only the linguistic problem – to learn, understand, explain the essence of the linguistic phenomenon, but also to solve the problem, which could occur in a real life.

Generally the communicative situations connected with professional training, are to be created at a more advanced stage of learning and differ significantly from the linguistic ones in the complexity of the task. At this level, the solution of the problem demands a high level of language knowledge [9, 342].

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While learning a foreign language students may face ill-defined problems such as evaluating scientific findings and arguments presented in the media, determining the benefits and risks of pursued policies through research, and constructing logical and scientifically sensible explanations of everyday phenomena. It follows then that learning situations should provide students with opportunities to engage in the scientific practices of questioning, investigation, and argumentation as well as learning content in a relevant and motivating context [2, 105].

Below there are some problem situations which differ according to the level of “troublesome knowledge” [6, 7] and which could be illustrative in teaching a foreign language to students of technical universities.

**Situation 1.** A group of words is presented: *gives, tables, Pete’s, the works*.

**Problem.** Explanation of the “s” ending meaning.

**Difficulty.** Overcoming the contradiction between form and content. Awareness of the students’ knowledge of grammar.

**Situation 2.** Adjectives are presented: *large, quick, high*, which have degrees of comparison and adjectives *each, every*, which do not have degrees of comparison.

**Problem.** Explanation of the cause of this phenomenon.

**Difficulty.** The difficulty lies in the fact, whether the learner understands the “quality as a sign” of the adjective, which can manifest itself to a greater or lesser extent.

**Situation 3.** The set of words is given: *scale, degree, gear-box, capacity, feature, lorry, tyre, equipment, modern technology, engine, plant*.

**Problem.** Allocation of words to a group based on the similarity feature.

**Difficulty.** Overcoming the opposition of the general and the specific in the selection of the dominant generalizing characteristic feature.

**Situation 4.** A linguistic miniature is proposed.

Y Y U R

Y Y U B

I S U R

Y Y 4 ME

**Problem.** The key to the miniatures. Establishment of associative links between letter and meaning.

**Difficulty.** In this case, students face not only difficulties of lexical and grammar nature, but also a more complex mental task. Knowledge of the alphabet and simple vocabulary plus intelligence allows you to decrypt this miniature as follows: *Too wise you are; Too wise you be; I see you are; Too wise for me*.

**Situation 5.** The proposed situation is based around a group of words: lion, telephone, milk,

happy, green, electric, explosion, squeeze, oil, arm, vegetables.

**Problem.** Combination of all words in a single story.

**Difficulty.** The students should have not only a high enough knowledge of English vocabulary and grammar, but also be able to imagine the situation in which these notions may interact.

**Situation 6.** The dialogue for listening is presented.

*M:* Jane, what was your overall impression of the applicants?

*J:* I was impressed with both but for different reasons.

*M:* Yes, I agree. Applicant 1 has quite a lot of experience – over 20 years, but is a little short in academic qualifications.

*J:* That’s true, whereas Applicant 2 has an M. A. in HR, as well as a General Business Degree. It’s very important to have up-to-date theoretical knowledge.

*M:* You are right about it. However, on the experience side, don’t you think she is a little weak?

*J:* Of course, but she has worked at the mortgage company which has given her some experience on the financial side of things.

*M:* I agree, but look at the wide range of responsibilities Applicant 2 has had. Those were very important HP areas at management levels.

*J:* But we are looking for someone who is a team player. I wonder about the flexibility of a person who has been in management for so long.

**Problem.** Definition of the speakers’ occupation and the prospects of the applicants.

**Difficulty.** The solution depends on how well the learner knows English, his ability to listen to a foreign language speech and, in addition, background knowledge of the speakers’ occupation.

**Situation 7.** There is a text. “We use the words *soft water* and *hard water* to indicate the degree of dissolution of minerals in water. *Soft water* has little or no impurities. *Hard water* contains other dissolved minerals. *Hard water* is normally drinkable but it can have a slight taste because of various ions in solution. When soap is added to *hard water*, the minerals prevent lathery soapsuds from forming”.

**Problem.** The explanation of the differences of water characteristics, the students’ justification of response. Possible discussion may concern a number of sub-problems:

1. Minerals do not dissolve in *hard water*.
2. There are minerals in the water.
3. It is very similar to liquids.
4. Everything sinks in it.

**Difficulty.** The difficulty of the task is to understand the implied information of the abstract, which is not reflected verbally; the ability to make the right choice having alternatives.



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**Situation 8.** Unbelievable! Several spaceships have landed on the Earth. The newcomers want to know more about the history of the planet. They believe that they can understand the earthmen better if they learn about their famous people and leaders. Aliens ask to name about 10 most outstanding figures who lived on their planet during the period of 2000 years. The list of political and military figures may be as follows:

1. Alexander the Great (356 – 323), Emperor of Macedonia, conqueror of the world.
2. Napoleon Bonaparte (1783 – 1830), French Emperor, conqueror of Central Europe.
3. Augustus Caesar (27 – 14 years), Roman Emperor during the period of the Roman Empire flourish.
4. Elizabeth Tudor (1553 – 1603), Queen of England during the period of colonialism.
5. Thomas Jefferson (1743 – 1826), founder of the American Declaration of Independence.
6. Genghis Khan (1167 – 1227), Mongolian conqueror of Asia and Eastern Europe.
7. Adolf Hitler (1889 – 1945), German dictator, initiator of the Second World War.
8. Vladimir Lenin (1870 – 1924), founder of the USSR.
9. Mao (1893 – 1976), founder of the Republic of China.
10. Peter the Great (1672 – 1725), Russian tsar.

**Problem.** Which of them (choose three leaders) had the greatest impact on the development of humanity?

**Difficulty.** Difficulties in solving this problem are related to the presence (or absence) of certain background knowledge of students. The solution of the arising difficulties is associated with the development of a foreign language cognitive activity in students, the ability to logically and rationally justify and prove their point of view and to make a reasonable choice from the information provided.

**Situation 9.** Employees of the research department of a large footwear company that produces boots and shoes are to develop a new type of shoes – electricity-producing shoes for special purposes.

**Problem.** Development of a new product for working conditions.

**Difficulty.** Definition of the object and the technology of its production, as well as compiling the list of employees who will participate in the development of the shoes, allocating tasks to each participant, application of the known methods, defining the steps that will lead to the accomplishment of the goal and confirmation of the result with the technological documentation, etc.

Debates in class are one of the examples of problem solving. A debate is a discussion of a proposal or a resolution with arguments for and against. Students are given a good and interesting topic to be discussed and they present their opinions and facts concerning the topic studied. Taking parts in debates students learn the methods of holding this kind of discourse, how to comment, agree/disagree with the friends, ask for explanation, express their opinion and use argumentation. This technique is good for teaching public skills, critical and logical thinking, identifying main ideas and deleting less important information. Students learn to listen to the other party, react and give arguments.

### Conclusion

The situations mentioned above as examples are typical for foreign language learning. They differ in complexity of the material presented, the initial level of the students' knowledge, requirements for solving the problem and the ultimate goal of the work carried out. Depending on the stage of work at the problem (defining the problem situation, clarification of conditions, nomination of the hypothesis, implementation and evaluation of the solution) it is possible to distinguish several levels of the organization of speech-making and creative thinking activity trained:

1. Creating a problem situation, i.e. "problem statement" of the task.
2. Problem presentation of the material and the subsequent organization of students' individual work to solve a similar problem. The involvement of students in the independent choice, design and formulation of the problem.
3. Partial search activity of students to solve the problem. The problems solution by the students and the subsequent discussion of the correctness of the decision.

Based on the above, we would like to emphasize that problem-based learning of a foreign language is a teaching technique that provides students with opportunities to relate a real situation to a specific problem. Problem-solving helps the students become reflective and flexible thinkers who can use knowledge to take action and find a way out [3, 244]. The creation of problem situations and their solution by means of a foreign language contributes to the formation of students' intelligence, the development of their creativity, the organization of their cognitive and mental activity, the ability and willingness to overcome arising real difficulties in future professional or everyday situations.



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