THE CHARACTERISTICS OF PROBLEM AND PROJECT-BASED LEARNING IN TEACHING A FOREIGN LANGUAGE AT A UNIVERSITY

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Abstract
The formation of the necessary motivation and competencies that will allow graduates to successfully immerse themselves in the intensive and constantly updated flow of foreign scientific, technical and public information is an important problem in teaching foreign languages at universities in the context of a universal global intellectual space. The requirements for the quality of professional training of students of non-linguistic specialties provide, among other things, the renewal of the former and the creation of new linguistic teaching techniques.

One of the promising projects in this direction is the teaching of a foreign language basing on problem and project-based learning. Its basis is the development of students’ cognitive skills, the ability to independently construct their knowledge, orient themselves in the information space, and develop critical and creative thinking. The main purpose of the method is to provide students with the opportunity to independently acquire knowledge in the process of solving practical problems or problems that require the integration of knowledge from various subject areas.

Considering the existing pedagogical realities, the application of this complex teaching method in the modern sociocultural environment gives grounds to characterize it as a new technology, naturally creative. Its features make it possible to individualize the educational process, effectively solve student-centered problems, enable the students to reveal their potential, to show greater independence in planning and organizing their activities.

The purpose of the article is to reveal the genesis and analyze the distinctive features the problem and project-based learning, in comparison with other student-centered teaching methods conducted in an interactive mode, clarify the background and formulate the organizational and pedagogical framework for the application of this educational program.

The methodological basis of the research is the system-structural approach, the categories and concepts of cognitive linguistics; the authors used the comparative analysis, the expert evaluation method and other comparative methods.

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Keywords: problem and project-based learning, neurolinguistics, educational process, innovation technics, personalized learning.

1 INTRODUCTION
Integration processes occurring in many areas of public life, intensify the nature of scientific, technical and cross-cultural contacts. A specialist, if he sets himself the goal of becoming in demand on the global labor market, is obliged to be informed about the latest achievements in the field of professional interests, to be able to freely communicate with foreign colleagues. The urgent need for graduates of Russian universities to speak foreign languages initiates the search for and approbation of new, more effective methods of foreign language teaching. Active introduction of innovative computer technologies into the daily educational process is a significant support for the efforts of university lecturers. The discussion of the above-mentioned issues makes the topic of research relevant.

2 METHODOLOGY
The Russian teacher-training and methodical tradition distinguishes the following project types [2]:
• research projects indicating the purpose and subject relevance; the theoretical module collects the language information; the creative part of the project involves designing the results obtained (report, column, presentation, etc.);
• role-playing projects, where the choice of roles is determined by the content of the research subject (literary and historical characters – for the humanities, profile specialists – for engineering and natural sciences);
• projects that are focused, as a rule, on the narrowly professional or social interest of a small group of like-minded participants in the project.

On the eve of the battle, the French commander de Turenne said to his generals, ‘This is my disposition. But besides it, be guided by common sense...’

The pedagogical ‘disposition’, with John Dewey acknowledged by the teaching community as its author, opens up a space wide enough to bypass the Procrustean bed of typological partitions for creative innovations. For example, the project-based method (in the modern ‘code’) does not describe the specifics of the whole process in terms of teaching foreign languages at a university. Speaking and writing skills, that is expressing your own thoughts in a foreign language, are developed at the final stage of the training. This is a productive form of speech activity (SpA), which is implemented including by using the project method. Opposition is represented by a receptive type of SpA, which means the ability to perceive foreign-language speech by ear or from a printed sheet, that is, to perceive someone else’s thought. This first step of obtaining a linguistic skill is achieved by repeatedly performing simple, non-problematic exercises. It is assumed that keeping them increasingly challenging will enhance the students’ interest in these classes. The variant provides for problematization of learning tasks by adding question words (Why? Which one? etc.) (tab. 1).

<table>
<thead>
<tr>
<th>Non-problematic learning tasks</th>
<th>Problematic learning tasks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listen to the conversation between a teacher and her class and answer the questions</td>
<td>Listen to the conversation between a teacher and her class and find out the answers:</td>
</tr>
<tr>
<td>(the message contains answers to the questions):</td>
<td><strong>Which</strong> of the rules did Nick break? <strong>Why?</strong></td>
</tr>
<tr>
<td><strong>What is the name of the student who broke the rules?</strong></td>
<td><strong>What part of the day was it?</strong> <strong>Is it important?</strong></td>
</tr>
<tr>
<td><strong>What part of the day was it?</strong></td>
<td><strong>Why?</strong></td>
</tr>
</tbody>
</table>

Designed by the authors of [3].

By introducing problem- and project-based learning into educational practice, we set the following tasks for our students:
• be able to demonstrate a decent level of language proficiency;
• demonstrate the ability to use the obtained research skills in the context of foreign language communication;
• persuade the listeners of the high level of their social and cultural maturity and professional competence.

We do not consider project-based learning as the main method, especially as claiming to cast doubt on the effectiveness of other forms of foreign language teaching. On the contrary, we are convinced of the benefits of joint activities with representatives of other teacher-training areas (including those who rely on psychological principles in education). Such coordination has good perspectives and will largely contribute to building intellectual and professional skills corresponding to the current level of cross-cultural exchanges.

3 RESULTS

3.1 Problem- and project-based learning in foreign-language environment of academic training

The subject of efficiency improvement in education has always occupied the great minds of philosophers, social psychologists and prominent representatives of the teacher-training community. The maxim by the eminent XIX century English philosopher John Stuart Mill set at the beginning of the
article may serve as a testament to the fact. Indeed, no matter how successful and time-proven the established practice (including teaching) seems, an innovative teacher will always search for opportunities to raise the teacher-training skills one step higher. What can make a person mobilize their intellectual resources and induce brainstorming?

It has long been known that a *homo sapiens* has an impulse for creativity when immersed into a virtual maze of problems. An ability to cope will manifest itself as the response, and the most capable ones (not everyone though) will find a solution to the problem. The first to adapt this psychological method to educational activity was a prominent American philosopher, psychologist and educator, John Dewey (1859-1952). In his work titled *How We Think*, the scientist presented his concept of the educational environment as a five-step algorithm. The author's reconstruction is based on the following alternative: either should we allow the spontaneously developing environment to manage the education of the youth, or should we specifically build our own environment for this purpose [1].

It is curious how, 85 years later (!), modern Russian publishers have actualized (or altered) the title of this monograph. 'Experience and Education' (as it was in 1916) was changed to 'Democracy and Education' in 2000. However, tangling 'democracy' with problem-based learning in educational environment does not seem organic. According to didactics principles, the teacher introduces problems at his or her discretion and in an authoritarian manner. It is doubtful that many students (especially non-budgetary education sector students) would welcome a bunch of problems to solve in the course of the educational process.

Problem-based learning as a scientific phenomenon is functionally closer to the notion of 'behavioral economics', studied by Richard Thaler, a professor at the University of Chicago, who was awarded the 2017 Nobel Prize for this research. This discipline shows how social, cognitive and emotional factors influence the algorithm of decision-making by economic actors (author's note).

In other words, an individual's reflective (kickoff) thinking as a learning incentive is at a disadvantage when it becomes a product of the organic course of things. It develops to reach the grades of critical thinking if it absorbs the experience of overcoming sensitive issues and discontinuities, which implies emotional strain and intellectual 'forechecking.'

This didactic novation by John Dewey, defined as ‘problem-based learning’, later served as the ideological foundation for a whole class of research that still remains relevant and which is known as ‘project-based learning or ‘problem- and project-based learning.’

In Russian teacher-training practice, the project topics are designed by methodologists of education bodies (with due consideration of policy programs and federal laws) and by teachers of individual disciplines, who draw on professional inquiries and conjuncture interests, the students’ expectations, their abilities and research potential in each of them. In any case, a modern project is a tool for enhancing cognitive activities and encouraging students to better themselves. Educational technologies based on the principles of problem- and project-based learning are being successfully applied in the sector of teaching foreign languages in universities.

These projects and the projects that are used to study other subjects have some features in common. Therefore, it is possible and necessary to rely (this becomes even more important with students of non-linguistic specialties) on the colleagues’ techniques, expertise and achievements. On the other hand, there are some distinctive features. First of all, it implies linguistic case studies when discussing business-related topics and project conditions. In this case, success largely depends on an elaborated plan for linguistic material selection, a logical sequence of work stages and individual tasks.

Ultimately, the final stage of the project is very demanding and includes presenting the results, defending and discussing them in a foreign language. Students learn to argue and defend their points of view, seek a compromise, absorb the culture of discussion and cultivate a tolerant attitude towards opponents. In addition to a sociolinguistic competence, pragmatic skills get built based on independent skills. All of this contributes to a feeling of self-confidence in the professional future.

3.2 Problem- and project-based methods of teaching a foreign language in the context of digitalization of education

The rapid growth and the active introduction of digital technologies in the field of education are accompanied by an active discussion of the prospects for this phenomenon. In particular, many experts complain about the external, decorative effect of the computerization of the educational process. And in this criticism they are not alone. Thus, with the advent of the era of electronic (E-
leaning) education, PowerPoint-presentations appeared and gained recognition among students. Naturally, this electronic format has become a valuable tool in the teaching (including foreign language) practice of universities. However (and this is recognized by foreign experts), “the search for ways to transform the positive attitude of students towards the presentation format into improving … educational results <still> remains a pedagogical challenge” [4]. This “challenge” should be an incentive for those teachers who use project-based methods. The criterion of the project includes the evaluation of the student’s work, while the electronic presentation, including videos, linguistic didactics, and voice overs, is the culmination of the training. This format objectively reveals the strengths and potential weaknesses. On this information platform, students defend their results, discuss with opponents, and, virtually plunging into a professional atmosphere, get an idea about which language aspects will be indispensable in their future job.

According to the stated research topic, we are interested in the issue of problem-and project-based methods of foreign language training and what opportunities open up for linguistics at the new stage of digitalization of higher education.

To elaborate on the topic, let us turn to issues related to blended learning, to the eternal dispute about the interdependence and interchangeability of classroom and autonomous work with students. With the advent of the Internet, the discussion of the hardware and software capabilities of multimedia tools, sufficient or unprepared for the transfer to the “online” of a particular type of language activity, became central to the discourse. There is no doubt about the effectiveness of training programs which instill common grammatical structures and speech clichés in the online format. However, until recently there have been difficulties caused by feedback, more precisely, its absence, which made it difficult for the teacher to interactively monitor the learning activities of students grouped in virtual teams. But today multi-party interactive communication is becoming real. This allows online linguistics to coexist on equal terms with the traditional "offline".

But why linguistics in the first place? The fact is that few disciplines can compete with linguistics in terms of relaying practical knowledge by means of software to an online format. Hence the rich experience and pedagogical competencies accumulated by university teachers in terms of working with students in this mode.

As for problem- and project-based learning methods, on online sites, the chances of effectively practicing these methods are even more preferable. This thesis is justified by the fact that the new generation of multimedia applications makes it possible for the teacher to communicate with students in the "question-answer" mode, providing prompt feedback. This is not the old communication through the display screen, the formal nature of which the critics of computer innovations complain about. In this regard, they consider it incorrect to diagnose the motivation of students. But if the student's motivation is a "black box" for a teacher, then this is already the red line for the problem and project-based method. However, new digital technologies make communication with the teacher dialogical, targeted and psychologically comfortable, as tete-a-tete takes place. That is, learning is personalized. Along the way, another stereotype against online is lifted. It is believed that only the traditional "offline" can give the experience of communicating with the external environment. But socialization happens in network groups. Team interactions are practiced there, roles are distributed, leadership qualities are brought up. Students contact each other at a fairly meaningful level “even when it comes to challenging tasks such as writing an essay or other creative works [5, website]. Negative cases are minimized through student solidarity. Ideally (not without the help of a moderator), a microclimate is created when it becomes interesting for successful students to help so-called losers. For the former there is an additional educational track, for the latter - a chance "not to get lost". And such contacts, such study itself is a problem activity. That is, the problem and project-based method, taking into account the modern digital "recharge", is easier to adapt to “online”.

The beneficiaries of the introduction of new computer technologies are predicted to be linguists, but the effective use of the project-based method requires the remarkable teacher’s erudition. First of all, to “have an in” with the generation of Digital Natives and coordinate intra-group relationships, involving them in the overall context of learning. At all stages of the project, to initiate, support, stimulate independent activity of students in their virtual group. To possess the skills of a psychologist: without this competence it is difficult to ensure the confidentiality of the educational process and to promptly extinguish conflict situations that are frequent among the youth.

In conclusion, we will express a debatable thesis of a methodological sense. From our point of view, the name “problem and project-based training” is not balanced. The key root concept is the word “problem”, but not “project”. Frequent use of the phrase “project-based method” without specifying the
“problem” is fraught with misunderstandings, the resolution of which turns into scholasticism. While the method of “problematization of educational tasks” from a scientific point of view will be more adequate and stricter.

4 CONCLUSIONS

The article addressed the issues of problem and project teaching of a foreign language at a university, considering the use of innovative computer technology. The following conclusions have been made:

The key word of the problem-based project education, is “problem”. The idea of John Dewey was to reconstruct the educational environment, aimed at problematizing of educational tasks.

Secondly, each person has a unique personality. The educational environment is most productive in a personalized space.

Thirdly, the last generation of computer technology can help to implement a student-centered approach to learning. The ability to use modern multimedia tools is an actual challenge to the entire teaching community.

Fourthly, for university teachers who communicate every day with the generation of Digital Natives, the promotion of digitalization in the educational process is a problem. First of all, it concerns the representatives of humanitarian subjects, including linguists, who cannot easily create their own pedagogical design.

Fifthly, the linguists themselves have competitive advantages over their colleagues, given the rich tradition of working in an extracurricular format.

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