Project-Based Method as an Effective Means of Interdisciplinary Interaction While Teaching a Foreign Language

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\textbf{ABSTRACT}

The article explains how to use a project-based method as an effective means of interdisciplinary interaction when teaching a foreign language on the example of The Institute of service, tourism and design (branch) of the North Caucasus Federal University (Pyatigorsk, Stavropol Territory Russia). The article holds the main objectives of the project-based method, forming their classification. The authors point out the need to conduct pre-project work by mindfully selecting the appropriate linguistic material, developing a definite system of tasks and exercises. Another important step is the selection of general or profile topics that could be of interest to students in terms of their future profession. In addition, the article describes several out-of-class projects as well as it provides basic requirements for using the project-based method while teaching a foreign language.

\textbf{KEYWORDS}

Project methodology, teaching a foreign language, cooperation, interdisciplinary interaction

\textbf{ARTICLE HISTORY}

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\textbf{Introduction}

In the development that is actually one of the key benchmarks in the modern pedagogical process could be obtained by using new technologies in the practice of teaching aimed at the student-centered education.

Among the variety of innovative student-centered language teaching technologies we highlight the project-based method and willingly implement it in...
our classroom and out-of-class activities. In our opinion, the project-based method quite fits within the traditional teaching process based on the class-lesson system without affecting the content of the training, defined by the educational standards for base level. The project-based method is a genuine pedagogical technology, which provides both successful learning of material and building a team, to ensure the intellectual and moral development of students in an atmosphere of friendly cooperation.

It has been more than a hundred years that the project methodology is used in the educational process. The founders of the project-based method are considered to be American philosophers and pedagogues: D. Dewey, W. Kilpatrick, E. Collings, etc. (Kilpatrick 2003), which proposed to build the training on active basis through expedient activities. They believed the skills and knowledge should be gained by the child through making a research within problem training environments, through experiments, models, schemes, etc.

Any European language has the same meaning to "project" that is "scheme, plan, drawing" and the Latin participle "projectus" means "conspicuous", "outstanding". Well, indeed everything the project methodology is aimed at should be bright, memorable, well-defined and have a specific schema. As a student-centered technology that implements training in collaboration the project technology is widely used in various subject areas (Dolmatovskaya 2000). The main idea for the technology is to arrange the social environments for students in order to enrich and expand their life experiences.

From students’ point of view being a part of the project means having the opportunity to do something interesting on their own, the opportunity to try their hand, to apply their knowledge, to prove themselves, to transmit their knowledge and skills to tackle a problem, benefit their teams, to publicly submit the results of their activities. From teacher’s point of view, the project is a didactic tool teaching how to find the right information, to plan activities, to make a research, to apply knowledge in practice, to arrange materials for presentation (Trim 1992).

**Methods**

The project technology makes teaching and learning relevant by intensifying the student as the subject of the activity, realizing his personal potential. It creates conditions to enlarge students’ creativity, provides productive teaching activities and efficiency of the educational process. Essentially, the project technology is an interaction in training with the students taking and performing different social roles (organizer, leader, doer, etc.) and preparing to implement them for solving tasks in real interactions (Pakhomova 2003).

The main objectives of the project-based method could be considered as providing self-service learning for students in the process of solving practical tasks or problems that arise in different areas of their professional activities, development of the creative potential of a student, developing the skills to debate, defending own point of view, being respectful to the others, making informed conclusions, being able to argument own statements, analyzing and simulating a situation, carrying out sociological studies, working with sources; forming of attitudes towards such values as responsible decision-making, tolerance, compromise, commitment to self-education and willingness to improve social life. The teacher here acts as a coordinator, an additional source of information and a mentor (Pakhomova 2004).
Among several classifications of the projects in the domestic pedagogy the most comprehensive one is made by E.s. Polat, M.Yu. Buharkina (Polat 2000; Polat et al. 1999) it specifies the following types of projects:

1. By the method dominating within a project: research; creative; adventure; gaming; information; practice-oriented.
2. By the nature of project coordination: explicit coordination; covert coordination.
3. By the nature of contacts: domestic (regional); International
4. By the number of participants: personal (individual); paired; group.
5. By the duration of event: short; average duration; long-term.

Project classification made by the area of expertise seems to be relevant for our purposes as well:

1. Mono disciplinary projects (projects within a single subject).
2. Inter disciplinary projects (the student is supposed to use knowledge in several disciplines).
3. Non disciplinary projects (projects that go beyond the subjects studied).

The project-based method is spreading in education systems around the world, on various subjects. We believe the project technology is quite effective in teaching foreign languages and we use it, both in the classroom and in extracurricular work with our students.

The main objective of teaching a foreign language is to form the intercultural communicative competence. To make sure our students acquire the necessary knowledge and skills in various kinds of speech activities at the level defined by the standards, each trainee should have an intensive oral practice (Zapesotskiy 2002) To obtain the communicative competence among students beyond the linguistic environment, it is not only a matter of making a foreign language lesson full of communicative and conditionally-communicative exercises that allow partially solve the communicative tasks (Program "Foreign language" ...). It is important to provide students with the opportunity to solve the problems that give rise to thoughts, speak in a foreign language on possible solutions to these problems so that students can get focused on the content of their statements, keeping the thought in the spotlight and using their foreign language to have the thought formed and formulated. Along with regional geography issues traditionally provided at foreign language lessons to make sure the students perceive foreign language as a means of intercultural interaction, one should look for ways to actively enable students in a dialogue of cultures, providing opportunity to practically learn the peculiarities of foreign languages functioning in new cultures. (Matros, Polev and Melnikova 2001; Methodical materials for a seminar ...)

The project technologies used both in classroom and extracurricular work with students studying a foreign language means giving them opportunities to practically adopt a foreign language to their future professional activity. That promotes planning and goal setting abilities in terms of activities in a foreign
language, motivates learning a foreign language, stimulates individual work (Shamov 2008).

We consider the projects as:
1. a part of the classroom lesson
2. the final lesson on examined theme
3. final test lesson
4. out-of-class activity

The projects we offer to our students partially function as communicative tasks to make sure the knowledge gained in studying a topic or a course, applied in the educational and real communicative tasks (Sergev 2003).

By the duration of event we are practicing short-, medium- and long-term projects requiring considerable time to complete. The latter are used for final classes and out-of-class activity.

By the area of expertise most of the projects we offer to our students are interdisciplinary because apart from using a foreign language the students are supposed to apply the knowledge related to their future profession. Many of the projects we offer for out-of-class activities can be attributed to non disciplinary, because they go beyond the subjects.

By the priority activity we offer the students information, research, practice-oriented (applied), creative, role, play and game projects.

Information projects are aimed at collecting information on a certain object, or phenomenon giving the information to the participants of the project, making analysis and synthesis of facts for a wider audience.

Research projects require a well thought-out structure, set goals, justified relevance, methods, thoughts and deeds subdued to the research logic, a structure similar to that of a genuine scientific research.

Practice-oriented (applied) projects from the very beginning clearly denote the result of activity of participants focused on their own social interests. These projects require a well thought script for all participants, the responsibilities defined to each of them, summing-up the project activities, common forming of the finished product, the externally evaluated project.

Creative projects do not have a well elaborated structure for joint activities, but they are to have a clearly thought-out, appearance and a form of results presentation (a newspaper, a video, a composition, a role-playing game, a holiday, an album, an almanac, a topical event, etc.) which corresponds to the logic of the activity.

Role playing and gaming projects do not have a clear structure in the beginning, stay open until the work is over. Participants take on specific roles, determined by the topic and contents of the project. The results of such projects may be set at the beginning of the project, changed throughout the activities, to finally become palpable by the end of the work. Of course, in practice, most projects are mixed. They contain within themselves all the above traits, manifested at various stages of preparation and presentation of the project (Tryapitsina 2006). Therefore, in formulating a project, we always take into account the characteristics and specific features of various types of projects, to identify ways of coordination, deadlines, stages, the number of participants, level of language training of students etc.
Results

As already mentioned, the project is based on a problem. To resolve this issue, the students apart from having a command of a foreign language, are supposed to possess the sufficient specter of subject knowledge, necessary and enough to have the problem solved (Galskova 2006). In addition, the students must have certain creative, intellectual and communicative skills, i.e. the ability to retrieve information from a foreign text, analyze information, making generalizations and conclusions.

Thus, using the projects requires a significant preparatory work, which is not only the teaching foreign languages, but also is a holistic system for high school training (Yermakova et al. 2014). Prior to offering students a project, we conduct the pre-project work carefully selecting the necessary language material to develop a system tasks and exercises. All the actions taken by the students and the teacher are aimed at achieving the project goals: learning appropriate lexical and grammatical units, searching information sources, selecting needful information, making registration and preparation of results. We also consider it necessary to pick topics that might be of interest to the students (general or related to the future profession), as an example we offer to start with: "A guide to the country where the language is spoken", "My hobby is traveling, etc. the topics the students know from school, so they can use the familiar vocabulary, making it possible for the teacher to gradually complicate the training.

"Traveling about Great Britain" is the traditional starting project for the 1st course students at our University We are quite confident that the students are always very interested to take up such an activity.

At the first stage, the students are offered to find geographical maps of Great Britain, followed by sorting out illustrations of the most famous places, picking interesting but little known historical facts and tracing the country developing up to the present day. In the end:

✓ arrangement of a stand (the geographical position of the United Kingdom);
✓ preparation and a brief description of slides (attractions);
✓ historical information (report, essay, etc.).

The same principle can work with other topics. A course based on the project work is performed as a chain of thematically interlaced projects implementing the principle of continuity and progressive complexity of linguistic material. We have developed modules with the basic topics to use in developing oral and written speech. The modules applied to projects activities ensure better assimilation of the proposed material (Pilat, Solomintseva and Shevchenko 2014). So, the students at the Faculty of Tourism and food service technology are always pleased to use foreign languages while discussing international cuisines, arranging tasting various dishes, developing catering service, etc.

Law students use foreign languages at court hearings in civil and criminal cases, remodel the offences and investigative activities, in situations of a need to provide legal support for projects, legal advice to foreign nationals, etc.
To provide an appropriate development, business and trade perspectives the students from the Faculty of Economics together with the future managers are studying regions in different countries. Currently the students are very interested in the projects related to the recreation and tourism cluster in the North Caucasus, the optimization of activities at the resorts of Caucasian Mineral Waters.

Students-designers are offered a variety of projects (such as creating own collections of clothes), and we invite them to present their project in a foreign language.

Future designers have the opportunity to become employees at the Museum of art and try themselves as English-speaking tour guides. Students make English reports about the favorite artists and set up a presentation of their paintings.

The makeshift Art Museum has two Halls for Russian and foreign artists.

The students can also tell about themselves as about an artist as well to present their own works exposed in the Hall of Russian artists. Having mastered the "Drawing" topic, the students make a project of "School of fine arts".

One student acts as a teacher, the rest are students, one of them being a newcomer.

In the process of "teaching" all actively help the novice to complete the drawing assignment. Having collected the students' drawings at the end of the lesson, the teacher starts reflection classes, evaluating and making a comment to each work.

The "Art gallery" project is preceded by the mandatory preparatory training, where the future designers compare the styles of painting, performing a picture of a famous artist in other technique, in a different style or using other materials.

The students are totally involved in the job, telling us a bit of the original painting and focusing on a detailed own version concerning the materials used, the style opted, the difference the copy and the original. For example, on the basis of the Degas' "Dancer tying her shoe ribbons, the student told a brief biography of the artist, described his style Presenting her Degas' oil version the student gave detailed information about the process of drawing the picture: canvas preparation, selection of tools and paints, sketch making, paint application and the final stage.

Turning to Karl Brullov's "Horsewoman", the student decided to reproduce it in a surreal manner in gouache, imitating Salvador Dalí. She also made a brief review on the life and work of the Russian artist followed by a more detailed talk about surrealism, its characteristic features and the process of making her picture: canvas preparation, selection of tools and paints, sketch making, paint application and the final stage.

Having the "My House" topic learnt the designers get ready to attend a customer in the design office to intensively use the assimilated lexical and grammatical material and extra information from the foreign media. In addition, they have the opportunity to put in practice their professional knowledge and skills, using imagination when making recommendations on remodeling and decorating of the apartment. "The house of my dream" is the project we offer to the engineering students for their final lesson on the topic: "My flat" or "My house".
Engineering students, as well as designers, find it is easy to draw a house plan or prepare a building design, as it is a common task they perform during their studies. They should describe the house of their dream: its appearance, location, materials used for construction, etc.

These are individual projects. While working on the project and its presentation, the students should use their language skills, if necessary, broaden them, improve communication skills, the ability to debate and defend their point of view in a foreign language.

As the final lesson on completion of the foreign language course, we offer students long-term projects. For example, students-builders have chosen a topic "The City of the Future". They have imagined that they are working for large construction companies, which have a task of changing the appearance of the town of Pyatigorsk to achieve a unique and refined image that corresponds to the status of a world-class resort.

They have chosen objects of the city, which in their opinion are subject to reconstruction or replacement. This is followed by a meticulous and responsible work on "construction" of buildings, hotels, residential complexes from plywood, cardboard, plastic, etc.

The "constructed" buildings need to be described (what materials were used, what guided them in a choice of area for construction, whether they took into account landscape peculiarities and observed ecological requirements). In the course of the project work, the students used specialized literature in Russian and foreign languages, collected, analyzed and summarized information. They developed team work, distributing tasks between the team members in accordance with their professional and personal qualities, improved skills in foreign language and special subjects. As a result, each “company” presented its unique spectacular project (Dadayan at al. 2013).

Discussion

The projects are final lessons on the topics. According to their results, we can assess the degree of assimilation of a certain educational material by the students.

Evaluating the finished project, we focus on implementation of communication skills, formed on the basis of linguistic, cross-cultural and culture-oriented linguistic knowledge, but the general effects of the design also counts. Criteria for assessment include the importance and the relevance of the problems, realistic design, autonomy work, original approach, achievements in verbal communication, etc. (Pilat at al. 2013).

Project activity of our students focuses on their academic competence, development of productive training activities, personal motivation to learning. The students themselves, taking into account the real needs and interests of all the members of the project team define its efficiency in the course of the project tasks discussion. The aim of our projects is creating personal educational product, they are intended to provide conditions for the development of the student’s creative skills in the quality of a secondary linguistic identity.

Projects included in traditional courses, constitute the most appropriate option for integration of project methodology in educational process, because they provide the use of the material of the course to organize the autonomy work of students. It is important to ensure that projects focus not only the external
(visual) result, but also observe the basic principles of the project-based method implementation and organically solve problems of educational and creative nature (Yermakova et al. 2014).

We encourage projects involving students of different disciplines. The big project with one theme and common targets is divided into work clusters between students. Every year we hold interfaculty events that can attend managers of faculties, teachers from different faculties and departments, students and all those who wish to assess the creative achievements of students, their ability to independently construct their knowledge and apply them to solve cognitive and practical tasks concerning their future professional activity operating in a foreign language.

As an example, let's consider the project "Construction of Rolls-Royce plant in Pyatigorsk".

At the presentation of the project:

Future civil engineers presented a design of the plant and the canteen and spoke on each workshop equipment and utility rooms;

Mechanical engineers provided us with information about cars, produced by the plant, gave their technical characteristics.

Designers presented sketches of advertising products: wobblers, flyers, business cards, etc. as well as the layout of a rest zone in Japanese style named “Meditation Garden” and explained their choice.

Foodservice production engineers spoke on the canteen project that combines modern design and excellent cuisine. In addition, they gave details on the workers' menu recipes, and proceeded to a tasting for the guests.

For the first time, students of three faculties were involved in a group project, now such projects are an integral part of the process of foreign language teaching in our university.

We consider that the important effect of the project work consists in activating self-learning skills in students: they have to write, draw, make presentations, use educational and reference books, communicate with each other, with instructors and specialists of different fields, look for photographs and drawings, record audio materials, make videos, etc.

Teamwork is an important part of professional activities, and work on project task in a foreign language involves students with different levels of language proficiency, that contributes to the ability of an adequate distribution of tasks in the group (for example, a student who is not good at English speaking, but can draw perfectly, is engaged in technical work etc.).

We have made sure that students take a great interest in working on the project: they are autonomous to find the necessary information, they offer ideas on the presentation, put forward hypotheses, and immerse in the linguistic atmosphere, which undoubtedly contributes to preserving the interest for the discipline "foreign language", improves communicative competence of students and prepares them for the practical application of language knowledge and skills. Projects attract students, because they provide an opportunity to demonstrate their achievements to a wide range of people and get an independent assessment.

Projects of out-of-class activity can cast mono disciplinary, inter disciplinary and non-disciplinary projects, which are presented in the form of various contests,
quizzes, activities relating to any events in the life of the group, institution, city; preparation of recitals, concerts, exhibitions, reporting events in a foreign language, etc., requiring students to apply knowledge in different areas, establishing not only intersubject links, but also those going beyond the subjects.

As an example, we propose to consider a project “World cuisines”. The expected effects of the project activity include learning of new lexical units, concepts, increased cognitive activity, creativity, interaction of various actors of the educational process, training a tolerant attitude towards other ethnicities, strengthening friendship and mutual understanding among the inhabitants of the Northern Caucasus, respect for traditions, willingness to continue bilingual education (Caucasian languages - Russian-English).

Students were asked to find interesting information about the European and Northern Caucasian cuisines, and select the most unusual traditional dishes. All participants were divided into groups, the objectives we defined: a) prepare a brief description of each people customs; b) find a traditional costume; c) prepare a meal; d) describe it in the language of the people to whose cuisine it belongs (languages of the Caucasus, Russian, English, French, German, Spanish). The tasks including dishes were submitting to spectators’ assessment. As the participants of the event were to speak different languages, each speaker had an interpreter rendering their speeches in English.

As another example of out-of-class activity, let’s revise a project made by students-builders, engineers and programmers named “Smart house”. The group was invited to create a design of the "smart House" and present it in English. Students made a plywood model, trying to equip it with "smart house" functions: the doors opened by remote control, as well as light went on and off, music played etc.

In their presentation in English, students used the edited pictures from the movie “Smart house”, promotional videos of the latest technologies used in construction; students of the Faculty of information technologies made a film about the development of society from ancient times to the present day.

It should be emphasized once more that the activity of the students at such events is simply remarkable. That is why the project-based method yields good results including increased motivation to learning, and as a consequence, good knowledge in a subject.

It is also important to remember that the project is a study of the problem, its theoretical and practical implementation. Often in the context of project work we use role games, hold discussions to promote assimilation of new material, stimulate cognitive activity and motivation. Of course, all listed instructional objectives are used by project technologies, but they also should include study of a problem, searching, creative activity, urge to education and self-education in the subject area, realized in a particular product.

Conclusion

Summing up the above, let’s state the basic requirements for using project-based method at teaching a foreign language:

- Existence of an important problem from the point of view of research and creativity, requiring integrated knowledge and search for solutions. Selection of projects’ topics in the course of a foreign language is practically not limited within
the frame of the program, the only restriction is that the offered projects should have practical significance to foreign language learners. The main thing is to formulate a problem for students to work on during the elaboration of program themes.

- Independent work of students (individual, group, in pairs);
- Theoretical and practical importance of the expected results;
- Use of research methods (define the problem and objectives of the research, put forward hypotheses, analyze data, sum up, make conclusions and present the final results).

In our point of view, the project-based method allows to solve the didactic task of making a transition from exercises making to direct cognitive activity requiring certain linguistic means; significantly increases autonomous work of students and diversifies foreign language classes, turning them into a research and discussion club where students solve interesting and actual problems that have a practical implementation, taking into account cultural peculiarities and based on intercultural interaction.

Disclosure statement

No potential conflict of interest was reported by the authors.

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