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Professional Culture of the Specialist of the Future

**THE PROJECT METHOD AS A LEARNING STRATEGY OF
DEVELOPING PROFESSIONAL COMPETENCES**

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Abstract

The educational activities of universities must meet the requirements of employers and facilitate the prospects of further employment of graduates. The article considers the components of professional competencies and culture competence being the vital part nowadays. The authors analyze the typical problems faced by the so-called marginal groups: first-year students (adaptation) and the graduates (job placement). One of the ways to help students apply the knowledge and skills learned during their studies is project-based learning. It is identified that the project method meets the outlined practical demands. Such concepts as “the project method”, “project based learning” and “project activity” are clarified. The paper outlines the project types used nowadays and explores the application of the project method to modern higher school educational process. The results of pedagogical research of the project method as applied to the development of cross-cultural communication skills within the course of foreign (English) language are presented.

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Keywords: Methods of learning, project method, project-based learning, students' adaptation.



1. Introduction

Research by Russian scientists in the field of employers' requirements to University graduates (Kamenskaya & Penkova, 2016; Khadieva, 2014; Kogan et al., 2017; Novoklinova, 2013; Sergeyeva & Voskrekasenko, 2013) shows the need for the future specialist to have a number of proficiencies in order to become competitive employees in a short time

First of all, employers value professionalism, intellectual and creative potential, entrepreneurial abilities and skills of employees.

Employers also signify the following competencies:

- initiative and independence;
- the ability for the team work;
- motivation for a life-long learning;
- responsibility and ability to solve non-standard problems;
- the ability to plan their activities and focus on achieving results;
- self-governance;
- discipline;
- sociability;
- self-presentation;
- the ability to work in a multi-tasking environment and with a large amount of information.

There has been designed a number of models of a modern specialist based on the requirements of employers nowadays. The following model of an international manager is of interest for our research (Frank, 2008):

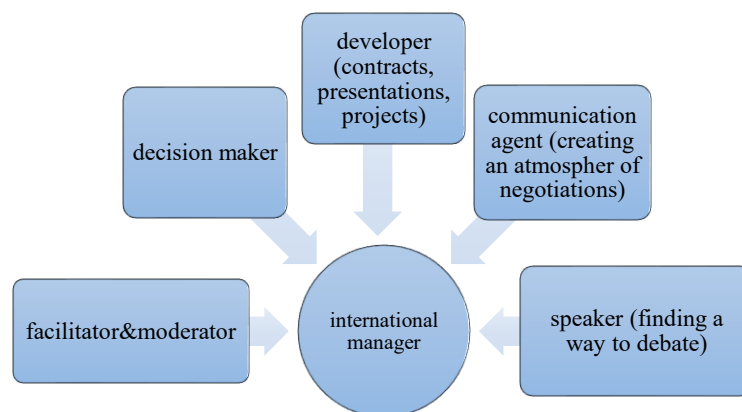


Figure 01. Functions of an international manager

However, despite the efforts of Russian universities to respect the balance between theoretical courses and practical studies, as well as the introduction of forms of academic and applied bachelors, the majority of the graduates face the problem of deficient-demand unemployment due to low level of their competitive advantage and lack of attention on the part of employers caused by following reasons (Khadieva, 2014; Glotova, 2014):

- lack of the employee's practical experience, and thus the employer's uncertainty in the success and effectiveness of such employee;

- the reluctance of the most employers to provide training for the rapid adaptation to new conditions of young professionals;
- inability of young professionals to self-representation and demonstration of their professional qualities at the interview;
- overestimation by young professionals their personal and professional skills;
- unwillingness to start professional activity from the very first career steps;
- inflated expectations/ steep demands for salary and promotions.

Based on the above, it can be concluded that the educational activities of universities nowadays must meet the requirements of employers and be associated with the prospects of further employment of graduates.

The success of the task set before the institutions of higher education of training the competitive specialists is largely determined by the effective adaptation of students to the educational process.

2. Problem Statement

According to the research of Russian scientists (Sergeyeva & Voskrekasenko, 2013; Orlova, 2008), first-year students have difficulties in social and professional adaptation. One of the reasons of that challenge is the difference in the organization and content of education in higher education and secondary school.

As a rule, Russian graduates of secondary schools are often poorly prepared to solving typical problems of working with both oral and written information due to low level skills of finding the necessary information, its filtering and organization in accordance with a certain topic, adequate interpretation, as well as oral and written representation of the results.

One of the leading Russian psychologist Granovskaya (2015) states that the modern school, proclaiming the principle of linear presentation of information, in fact focuses on the fragmentary learning of the material, without the development of students' skills to analyze information and build links between sections of a particular subject. Later, during university studies, students face a conflict between their individual cognitive style of taking the information (fragmentary) and the traditional, linear supply of information (mainly lecture).

The researches divide the adaptation period problems (Sergeyeva & Voskrekasenko, 2013) into the following groups on the base of their causes:

- didactic;
- socio-psychological;
- professional.

The didactic problems include a sharp change in the content and volume of the studied material; a variety of new forms and methods of teaching; complex scientific style of lectures; lack of proper skills of individual/self-study work, etc.

Social and psychological problems present a restructuring of the existing habits and skills connected with the change of the social environment; a sharp transition to an independent adult life; doubts about students'/ young specialists' abilities, lack of confidence, fear of exams, fear of being expelled, etc.

Professional problems contain doubts about the correct choice of university, future profession; inability to see the direction of the learning process and lack of understanding that the formation of the future specialist begins with the first day of training.

Thus, to solve the complex problems of the adaptation period for first-year students and the formation of their professional competencies, it is necessary to develop and implement modern learning technologies in the educational process. Also, the following is vital: the successful professional activity of any specialist in modern conditions – conditions of dialogue of cultures – will depend on the ability to understand, establish and resolve existing cultural differences; thus, the competence in the field of intercultural and cross-cultural communication becomes an integral part of the professional competence of graduates.

3. Research Questions

Akhadov (2010) mentions that foreign language is “both the goal and the learning tool in the project method framework” (Project method of teaching English, para. 11). As a learning tool in the framework of the project method, a foreign language allows students to improve their skills in self-study work, teamwork, creative work, etc. – all the skills which are of great importance for future specialists (see Figure 01). There is no doubt that the successful professional activity of any specialist in the modern conditions of the dialogue of cultures will depend on the ability to understand existing cultural characteristics as well as the ability to solve possible intercultural conflicts.

Thus, the objectives of the research are the following:

- to analyze the concept of the project method at the present stage;
- to teach a foreign language to non-linguistic first-year students with a focus on intercultural communication skills learning with the help of the project method.

4. Purpose of the Study

The purpose of our study is to analyze how the project method can be used in teaching a foreign language (English) to first-year non-linguistic students. Foreign language is a basic academic discipline, and communicative competence is among the professional competencies of future specialists. Within the framework of this research, we will study and analyze the features of the method of projects in the modern educational process in the training of non-linguistic students, since the analysis of scientific and pedagogical literature (Aplaeva, 2017; Bolsunovskaya et al., 2015; Capraro & Slough, 2009; Lee, 2009; Pecore, 2015; Zhylybay et al., 2014) confirms the growing interest to this method of universities teachers throughout the world.

5. Research Methods

In the course of our research we used the following methods:

- theoretical research method;
- comparative method which shows the use of project method in pedagogical sphere;
- empirical research method: talking, monitoring, testing, pedagogical experiment;
- diagnostically researching method.

6. Findings

A current trend in world education as well as in Russian education involves the growing movement of project-based learning classrooms (Pecore, 2015; Polat, Bukharkina, Moiseeva, & Petrov, 2008; Zemlinskaia & Fersman, 2017). Historically, the method of projects originated in the end of the XIX century in the United States. Its conceptual basis was the didactology developed by the American teacher, psychologist and philosopher J. Dewey, the essence of which was learning through doing or acting and trying. In 1918, William Heard Kilpatrick published the 18-page essay “The Project Method,” fully titled “The Project Method: The Use of the Purposeful Act in the Educative Process,” in *Teachers College Record*. According to W. Kilpatrick “the project should represent a purposeful activity of the worthy life in a democratic society, and thus the project or purposeful act is considered as life itself and not preparation for later living” (Pecore, 2015, p. 158). The basis of the new didactic system, in contrast to the traditional one, which was one-sided and proclaimed the principle of knowledge transfer from teacher to student, laid down the following basic principles:

- students’ interests;
- learning through acting and trying;
- knowledge a consequence of overcoming difficulties;
- the knowledge gained is a consequence of overcoming difficulties;
- creative work and cooperation.

Thus “when engaged in a wholehearted purposeful act, the student becomes master of his fate, not a slave or serf to chance” (Kirkpatrick, 1997, p. 3).

W. Kilpatrick identified four types of projects (Pecore, 2015):

- Type 1 projects objectify some external idea or plan (e.g. writing a letter or presenting a play). This type of project requires a four-step process involving purposing, planning, executing, and judging;
- Type 2 projects involve enjoying a sensuous experience (e.g. listening to a poem, or appreciating a painting);
- Type 3 projects are projects that require problem solving (e.g. include findings of an experiment);
- Type 4 projects involve gaining a certain skill or knowledge (e.g. learning grade-appropriate writing). This type of project requires the same procedure of four-step process proposed for Type 1 projects.

The critics of W. Kilpatrick pointed out that his concept, at least in its original form, is more a philosophical justification of the new method than a specific set of tools (Kazun & Pastukhova, 2018).

In 1980s and -90s the project method has gone through a rethinking and improvement due to its criticism. A renewal of project method has settled down in the 21st century getting a new name and interpretation - Project-Based Learning (PBL). It should be noted that there is still no single accepted definition of PBL. As a didactic category, the project method is defined as “a certain aggregate educational and cognitive techniques that allow you to solve a particular problem in as a result of independent actions of students with the mandatory presentation of these results” (Polat et al., 2008, p.68). Gabdurakhimova & Fatkhullina (2016) state project training as a didactic system in which the

project method takes the place of the leading method of training, and the rest perform an auxiliary function. In our research we will define the project technology as a systematic approach to the organization of the learning process, the structural components of which (a set of research, retrieval, and problem solving methods) are interconnected and have a clear implementation algorithm.

A study of the Project-Based Learning (Pecore, 2015) specifies five most distinguished types of Project-Based Learning:

- *challenge-based learning* fosters students to solve real-world problems by participating in a multidisciplinary approach to teaching and learning over an extended period of time;
- *problem-based learning* is an instructional approach that presents students with solving open-ended problems, etc. case studies;
- *place-based learning* involves students in authentic work within the local community, accentuating a service-learning component connected to the local heritage, culture, landscape, and so forth, as the foundation for the subject(s) being studied;
- *activity-based learning* implies exploring a subject through experiments and activities;
- *design-based learning* motivates students to engage in the task of designing or redesigning a product or system or creating a physical object connected to the curriculum with the purpose of enhancing creativity.

Thus, the main purpose for students' project activity is to acquire knowledge whilst solving a theoretical or practical task that requires knowledge from different subject areas. The above analyzed Russian and foreign pedagogical literature allows to conclude that the modern modification of the project method (PBL) is focused on the formation students' key professional competencies, such as the ability to work in teams, the ability to plan their activities and focus on achieving results, the ability to present their findings and the results of their work, etc.

The experiment studied the peculiarities of the project method in higher school was carried out at Peter the Great St. Petersburg Polytechnic University (SPBPU) in 2018. The results of that study were used to generate a typology of project-based approaches to teach foreign languages with the focus on cross-cultural communication. During the development process, two major phases of analysis occurred are empirical and analytical. The empirical work enabled the construction of an initial typology, and the analytical is a refinement of the language and alignment of learning outcomes with the associated processes.

Peter the Great St. Petersburg Polytechnic University is a major Russian technical university with many long-standing high-profile scientific schools. The University has an impressive track record of undisputed achievements in the research, education and innovation spheres. There are 11 basic Institutions within the Polytechnic University. Also, the University is not only prominent scientific schools of physicists, chemists, metallurgists and hydraulic engineers but includes the Institute of Industrial Management, Economics and Trade which was established in 1902 as the successor of the Economics Department. Today the Institute prepares practically-oriented specialists who possess the fundamentals in economics, management, information systems for industrial enterprises, small businesses, distribution companies, managerial, financial, investment and many other structures.

The experiment was conducted in 2018 among first-year students of the departments "Business Informatics" and "Trade Business". The criteria for selection related to differences of project types,

variations in the stage of program, number of project methods described, and discipline content. There were 40 participants who attended the lessons of general English. Experimental groups A and B were formed, which, in turn, were divided into mini-groups to carry out project tasks. To boost motivation, at the stage of selecting topics for the project assignments, the students were asked to choose topics on their own, taking into account the following criteria: the topic should be relevant to the lexical and grammar topics of the course, and focused on a particular cross-cultural problem within the course units. The students of Group A were asked to choose their topics within the unit “Advertising”; the students of Group B made their findings within the unit “Education”.

At the stage of project planning, the possible sources of information search were offered to the students. At the same time, the participants were to find most of the information themselves; the aim was to help develop their ability to structure and highlight the necessary information, to search and make findings on the Internet in native and foreign languages.

The progress report of the data received by the project teams was held and cover recommendations were given.

During the defence of their project, the students were to make presentations showing the results in English. The duration of the presentation should not exceed 10 minutes. The students were supposed not only to present their results, but also demonstrate a good vocabulary on a given topic, the developed skills of answering questions and communicating with the audience. The results showed that both groups successfully coped with the task: the presentations were informative, the students had a good command of vocabulary and confidently presented the material in a foreign language. All the participants were able to consider the stated topics in terms of cross-cultural differences, to make analysis, to offer solutions to some cross-cultural problems revealed in the presentations.

The final stage contained the evaluation and conclusions of the work done. The following graph presents the results of Peer-Review the students were offered to conduct according to the proposed criteria on a 5-point scale:

- compliance the project with the educational topic;
- the information value of the presentations;
- ability to present the findings;
- ability to deal with after-the-presentation questions;
- how successful the information was selected;
- team work and decision-making;
- English language fluency;
- ability to cope with cross-cultural problems.

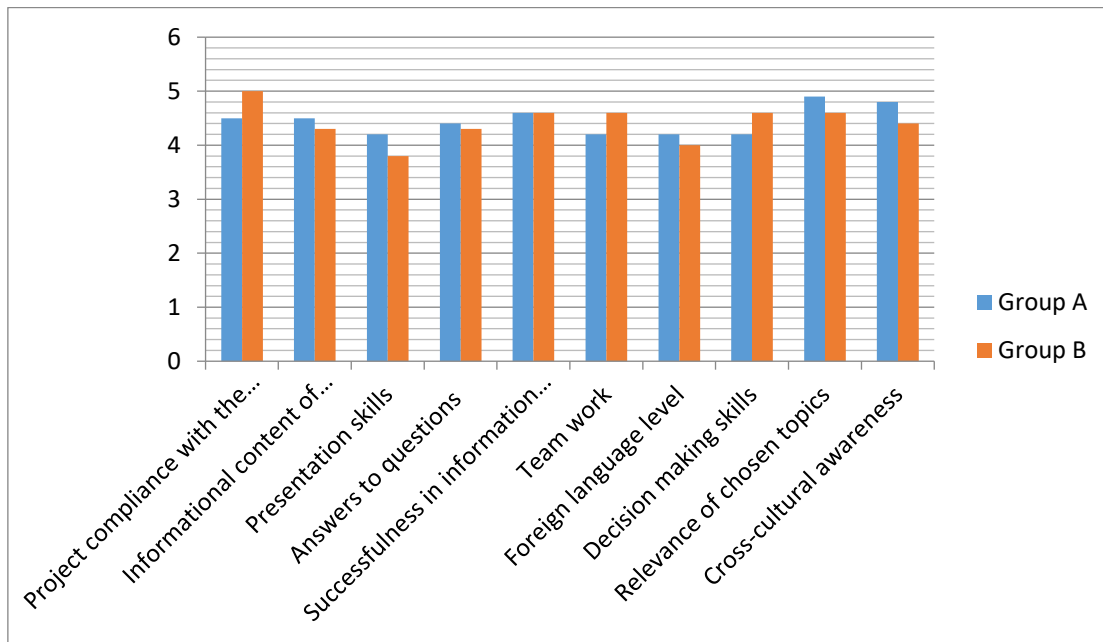


Figure 02. The results of Peer-Review

After all the presentations had been made, the students were tested in order to check how much information they learned. This test showed quite good results both in Group A (87.5%) and Group B (77%), that indicates that the information received from the presentations was learned well.

The survey made amongst the participants showed that 97% of respondents consider the experience of doing the project as useful and very interesting.

While working on the project, 8% of respondents had difficulties with its implementation. Talking about reasons, the students named the lack of involvement of all the participants in the work, difficulties in finding information, as well as lack of motivation.

The majority of students (97%) considered the work of the project Manager to be highly successful.

The next question in the questionnaire concerned the identification of the skills that students were able to acquire or use while working on projects:

- 59% of the surveyed students managed to improve their ability to work in a team;
- 68% acquired the skill of finding the necessary information;
- 86% acquired the skill of information processing and structuring;
- 24% acquired the skill of independence in decision-making.

The question of the knowledge acquired during the work on the projects showed the following results:

- 46% of respondents gained better understanding of other cultures;
- 57% gained better understanding of cultural differences between countries;
- 59% acquired more knowledge of new vocabulary, terminology, speech structures;
- 24% got an understanding of how to avoid intercultural conflict in different communicative situations between representatives of other nationalities;
- 16% acquired knowledge of topics tabooed in other cultures.

89% of the surveyed participants gave a positive answer to the question about the benefits of the project method in learning English language in the future.

The focus of the research presented here was made on teaching foreign languages within cross-cultural communication. In this regard, the students - participants were tested to measure their level of international sensitivity both at the beginning of the pilot training and upon its completion. In addition, lexical and grammatical tests were conducted to study the dynamics of lexical and grammatical skills of students. The results of the comparative analysis presented below revealed a positive dynamics in such skills, as well as an increase in international sensitivity.

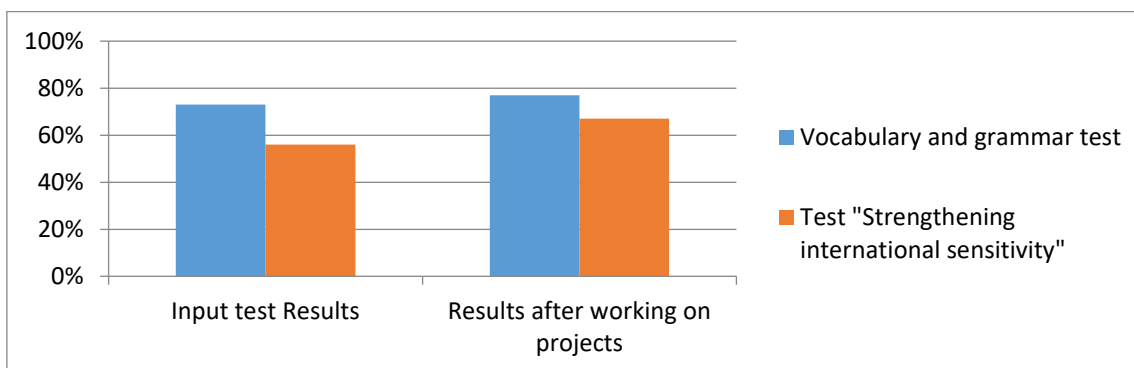


Figure 03. Comparative results of Group A

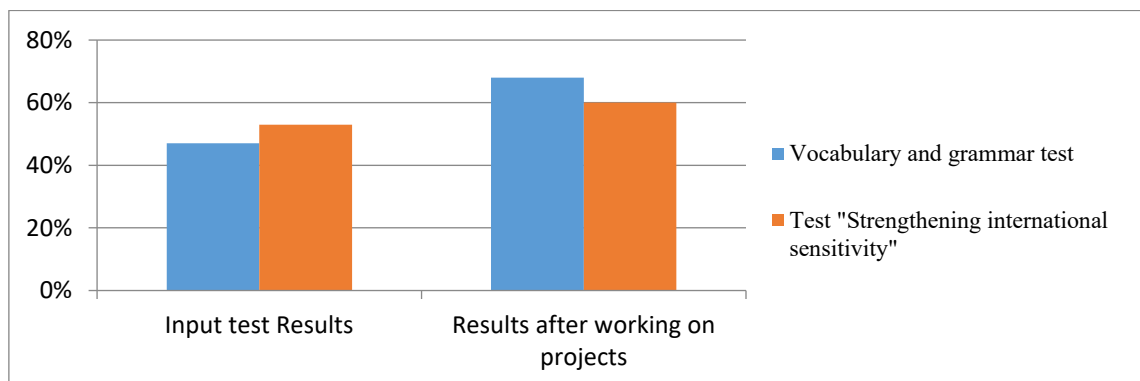


Figure 04. Comparative results of Group

7. Conclusion

As the theoretical-research and comparative analyses stated (Barron & Darling-Hammond, 2008; Polat et al., 2008), implementing a project is not enough to be considered project-based learning (PBL) unless five definitive features are met. The essential features of PBL are as following:

- a central project;
- a constructivist focus on important knowledge and skills;
- a driving activity in the form of a complex question, problem, or challenge;
- a learner-driven investigation guided by the teacher;
- a real-world project that is authentic to the learner.

In our research we have attempted to comply with the requirements for PBL. The results of the project activities of students are used in the further process of teaching a foreign language within the cross-cultural communication.

Also the results of the research show the effectiveness of PBL to form the necessary professional competencies of future specialists (team work skills, presentation skills, decision making skills in a multitasking environment, etc.).

However, despite the obvious positive results of the use of PBL, our research has revealed a number of problems faced by both students and teachers, namely:

- significant time and effort by the teacher in preparation for PBL and monitoring of students' activities;
- uneven digestion of educational material by students, which reduces the effectiveness of interdisciplinary projects;
- absence of a course on the basics of project design and practice, which could prepare students for PBL;
- fuzzy criteria for assessing the real contribution of each participant in the implementation of the group project;
- students' lack of interest or motivation.

However, the picture is not yet complete. Further contextual research is needed on the ways in which project types may be used in combination, their impact on the learning experience, the spread of project use across levels and types of program. Most importantly, given the context of the study, in a single Institute of Industrial Management, Economics and Trade, it would be important to extend these findings in other environments with varying educational philosophies and organizational constraints.

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