

UDC 37**Project method of teaching as a way to develop independence and creativity****Viktoriya A. Blinova**

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Abstract

The study aims to investigate the concept of the project method of teaching as an effective way to develop students' independence and creativity. The author researches theoretical aspects of the project method, as well as features and conditions of its implementation into the educational process. The study contains the review of theoretical basics of project activities, the methodology of successful implementation of the project method of teaching into the educational process, and the significance of the project method of teaching for the formation of students' independence and creativity. Special attention is also paid to the role of a teacher in the organization of effective project activities that promote active participation of students in the project, increase the motivation in working on a project. The results of this research confirm that the project method of teaching promotes better assimilation of studying material, as well as it promotes development of students' independence and creativity, thus formation of necessary in the modern world competencies.

For citation

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Keywords

The project method of teaching, project-based learning, independence, creativity, problem-solving, educational process, competencies, innovations.

Introduction

New personal characteristics and competencies requirements appear in the modern fast changing world which challenges teachers as well, who help students to adapt by developing their competencies of independence and creativity. One of effective methods that are used in the educational process in order to develop these personal qualities in students is the project method. The development in students of independence and creativity is one of key tasks, because those characteristics allow a person to successfully perform life tasks including professional ones, promote formation of initiative and creative personality.

The choice of researching the project method of teaching is determined by the need of the educational system to move to active, creativity and independence oriented methods, while staying true to the traditional methods of education as well. The project activities are precisely in this manner – they require a search for ideas and solutions, initiative, innovative approach, which provides development of analytical thinking, creative skills, teaches to think outside the box and thus meets the modern educational requirements and trends. The study of the role of the project method of teaching in the development of independence and creativity is relevant, because this pedagogical method can raise the effectiveness of educational programs and help in formation of future competitive specialists. The relevance of the topic is also confirmed by the need for innovations in the educational process that could ensure development of students' personalities in accordance with modern requirements.

Purpose of the research: to study and justify the effectiveness of the project method of teaching as a way to develop independence and creativity in students, identify ways and conditions of implementation of the project method into the educational process.

Research objectives:

- to study theoretical basics of the project method of teaching, as well as its role in formation of independence and creativity in students;
- to analyze modern approaches and ways of implementation of the project activities into the educational process;
- to identify organizational features of the effective project activities.

Object of research: the process of development and formation of independence and creativity under the conditions of use of the project method of teaching.

Subject of research: forms, ways, conditions of implementation of the project method of teaching into the educational process that would provide development of independence and creativity in students.

Theoretical basics of the project method of teaching

Pahomova gives a precise definition of the project method: “The educational project method is one of the person-oriented technologies, a way of organization of students' independent activity that is problem solving-oriented and that integrates into itself the problem approach, group methods, reflexive, presentable, research, search and other methodologies” [Pakhomova, 2005, p. 21].

It is worth noting that the idea of implementing practice-oriented activities at schools are not new. In 1921 John Stevenson wrote: “Mind is active not passive and its methods of procedure are experimental”. While working on a project, students take an active part in the process of solving the task within the framework of the topic of the educational program, search independently for the answers on coming up questions as work progresses, and do not get prepared teacher's instructions, which

teaches students a relevant and important in the fast changing modern world skill of solving problems independently, develops in them creative thinking and flexibility. Being a supporter of the project method of teaching, John Stevenson claimed: “The project idea aims to present problems in situations not essentially different from those of life and to develop the technique of carrying the act to completion” [Stevenson, 1921, p. 191]. We learn and think creatively the best when it is crucial for life, after all, learning something new, creating innovations is also a mechanism of human survival. If man would have not found ways to hunt and make fire several thousands years ago, man as a biological species might have risked to appear on the verge of extinction. Cabeça speaking about creativity as a biological weapon in their article assumes: „Existing as a tool, which in fact facilitated the survival and continuity of the species, it was apparently precisely thanks to it that the fragile primate gradually became the sapiens and thus conquered the environment — despite the numerous dangers and predators — becoming at the apex the predatory pyramid“ [Cabeça, 2010, p. 12]. The project method is effective, because it requires an active effort of putting the studied theoretical material into practice, into real life, it gives students an opportunity to truly dive into the subject area that they diligently study in classes at school and to solve a real problem, it provides a raise of motivation and interest in studying. Back in the early 20th century, when the project method was still in its infancy, teachers noticed it's effectiveness: “Some teachers in agriculture find that the work done on the plots of ground owned by the school is not capable of arousing the genuine interest of pupils; this is due probably to the artificial setting. When the work is taken up as project at home and on their own farms great interest is aroused because of the natural setting for the problem” [Stevenson, 1921, p. 118]. A similar observation is relevant at present times too: “From the student's point of view an educational project is an opportunity of doing something interesting independently, in a group or on their own, while making the most of their opportunities; it is an activity that allows students to express themselves, to try their hand, use their knowledge, to bring a benefit and to show publicly the achieved result; it is an activity that is aimed at solving an interesting problem, that is formulated by students themselves in the form of purpose and objective, when the result of this activity – the found way to solve the problem – is of a practical nature, of great practical significance and, what is quite important, is interesting and significant for the discovers themselves” [Pakhomova, 2005, p. 12].

The implementation methodology of the project method of teaching into the educational process

Before speaking about the implementation of the project method of teaching into the educational process, it is needed to comprehend the typology of educational projects.

“First of all, let's decide on typological features. Such, from our point of view, may be:

- The dominant activities in the project: research, search, creative, role-playing, applied (practice-oriented), introductory-orientational, etc.
- Subject-content area: monoproject (within the framework of one area of knowledge); interdisciplinary project.
- Nature of project coordination: direct (rigid and flexible), hidden (implicit, project participant-simulating).
- Nature of contacts (among members of the same school, class, city, region, country, different counties of the world).
- Number of members of the project.
- Execution time of the project” [Polat et al., 2002, p. 71].

In English class a project may be implemented in the form of a role play, for which students could

create and act out in class scenes based on real life, applying a foreign language within the framework of the topic under study (for example “In the supermarket”). Students could present observations and experience, difficulties and their solutions in growing a plant from a seed at home as results of biological projects in biology class. In physics class, a real experiment using real equipment, for example light-emitting diodes, batteries, resistors, may play the role of a project as part of the study of topics about electronics and electricity. “Projects, for example, may consist of building a motor boat, designing a playground, or producing a video film” [Knoll, 2014, p. 1]. The practice-oriented projects, surely, should be fulfilled by students independently, however, teacher's mentoring is still important: students shouldn't feel alone while working on their task. “When using the project method, the role of the teacher changes. It is different at different stages of design. The teacher acts as a consultant, assistant, observer, source of information, coordinator” [Khatamova et al., 2019, p. 232]. The teacher should only guide students on the way of realization of the project, and not solve the problem instead of the students. The phases of the project life cycle are: (1) project initiation, (2) project planning, (3) project execution, (4) project closure [Westland, 2006, p. 4]. The project method fulfilled under the mentorship of a teacher is an excellent way to let students get their own experience on every stage of the project development, as well as the possibility to express and enhance their creativity and talents. Back in 1921 John Stevenson claimed that “The pupil secures larger benefit if he originates the project, but by no means should we classify projects as worthless if the teacher suggests them. The value then depends on whether the pupil accepts them as his own, and this is where the skill in teaching will be of considerable service” [Stevenson, 1921, p. 125-126].

The importance of students gaining experience can be explained by the fact that while solving a problem students implement logical thinking – independently, consequently, gradually – to come to the successful result. John Stevenson mentioned: “The steps in the logical method of arriving at a solution of a problem are: (1) defining the problem; (2) collection of data; (3) hypothesis; (4) verification.

The project when carried to completion uses the identical steps of logical thinking. If the foregoing items were given as constituting the method the project employs in arriving at solutions, the statement would be wholly correct. The project furnishes the opportunity for placing pupils in situations in which it is absolutely necessary that they think in order to solve the difficulty”. [Stevenson, 1921, p. 126]. Modern researchers take a similar stand, which shows the relevance of the studying question: “The activity in the educational project subjects to a certain logic that is implemented in the sequence of its stages. After the project was presented by the teacher (name, topic and problem), the independent for students formulation of purpose and objective, group organization, distribution of roles in the group, then choice of methods, work planning and actual its implementation follow.

The implementation of the educational project ends with a presentation of the obtained results. Since the student project activities are mostly independent, we know precisely during the presentation (and children provide us it), what was done during the independent project work” [Pakhomova, 2005, p. 14]. Presentation of research results is an essential part of project activities, while working on it students can approach the task creatively, which develops their inventiveness and work presentation skill. “Students are also invited to produce an advertising poster, booklet, poster or album with short texts, drawings, photos, postcards, reflecting the most essential content of the topic, by the time they finish studying the topic [Khatamova et al., 2019, p. 232].

To implement the project method into the educational process successfully the teacher should pass on enough knowledge of the subject area, as well as organize the project work effectively. It is needed to apply different methodologies and approaches for example discussions, brain-storms, to create a favorable educational environment and to activate students' creative self-expression, to inspire them to

explore. "From a teacher's point of view an educational project is a didactic tool that allows to teach design, that is, purposeful activity to find a way of solving the problem by solving arising questions from that problem when considering it in a particular situation" [Pakhomova, 2005, p. 14]. The teacher's task is not only to teach the theoretical aspects and to help students to understand the project purpose and objectives, but also to guide students through the whole process of their research, helping them to discover new facets of the subject area, as well as to develop their skills and talents. For example, the method of project-based learning can be effectively implemented in foreign language classes to improve students' communicative skills. "In project teaching method students can develop their self study activities: they will get used to educate beyond the program, to use the knowledge, to solve communicative, informative problems, to have an opportunity to study cultural- informative competencies. That is why it is considered very effective" [Zhylybay et al., 2014, p. 622]. While communicating, discussing in the language being studied and exploring the foreign language, students learn the features of language functioning, and also the culture and communication norms in a foreign language, which provides development of students' communicative competencies, productive language skills, independence and broadens students' horizons that are important tasks of general education. "Working on projects not only enables us to be able to work on projects in terms of teaching process, analysing the findings achieved using at the level of real communication, but also teaches us to improve separate aspects of language and gives an opportunity to improve communicative etiquette" [Rakhmonberdiyeva, 2019, p. 136].

The importance of project method of teaching for development of students' independence

The project-based learning is problem-solving oriented. That makes independent execution and focus on results of the highest importance. "The project method is based on the idea that constitutes the essence of the concept of "project", its pragmatic focus on the result that is obtained when solving this or that practically or theoretically significant problem. This result can be seen, comprehended, applied in real practical activities. To achieve such a result, it is needed to teach children to think independently, to find and solve problems, using knowledge from different fields for this purpose, the ability to predict results and possible consequences of different solution options, the ability to establish cause and effect relationships" [Polat et al., 2002, p. 67]. The project-based learning is a result-oriented method and requires a big effort from students and depends on a lot of factors on the way of the project execution.

It is in this process – of trying and making mistakes, studying the material, making decisions, answering the questions independently, information analysing, finding new approaches – the outstanding knowledge and development possibilities are hidden. "Pedagogical result of the project activity is first of all the activity itself" [Pakhomova, 2005, p. 15]. "A child's individuality cannot be found in what he does or what he consciously likes at a given moment; it can be found only in the connected course of his actions. Consciousness of desire and purpose can be genuinely attained only toward the close of some fairly prolonged sequence of activities" [Dewey, 1974, p. 176-177].

Evaluating the results of the project activities, it is needed to focus on the results themselves as well as on the process of working on the project. It is important to take both the result and the process into consideration to ensure the transparency of the project evaluation for the students in order to allow them to pay attention to their strengths and weaknesses and to see on what they could work in future. Reflection is a significant skill in the modern world. While developing the skill of reflection by analysing the work, noticing the shortcomings students develop independence. "The project method is

always focused on students' independent activity – individual, pair, group that students execute during a certain period of time" [Polat et al., 2002, p. 67].

Independently – doesn't mean alone. The project can be fulfilled in cooperation with other students which shows that the project method also helps to develop students' communicative skills, to learn interaction with peers with different characters and backgrounds, to improve exchanging opinions skill to form the important in the modern world team-work competence.

The impact of the project method of teaching on the students' creativity

The creative approach of students to the project activities directly depends on their motivation and interest. John Stevenson also noted: "Every one works with the greatest effort at the problem in which he is most interested. The project provides for a natural setting which means that it is associated with many interests of the learner. It follows that the projects which are accepted for solution will be highly motivated - they will be worked at with a maximum effort because they hold great significance for the learner. A need for the solution is left" [Stevenson, 1921, p. 119]. The teacher's role on this stage is: to select a relevant project topic based on students' level of knowledge, age and preferences to arouse their interest and curiosity to the project, to highlight the practical significance of the project and to explain its relevance, to maximally interest and involve students into the project activity through discussions and opinions exchange. From the teacher's side the project activity is a very painstaking work that includes:

- selection and provision of suitable materials (according to students' knowledge level and interests);
- using effective approaches to raise motivation in students of different ages;
- organization of conditions for differential and group project work;
- creating a trusting atmosphere in the group that encourages the team work;
- the professional guidance on every stage of the project;
- to organize the transparency of the evolution of the project results.

The project method of teaching requires from a teacher new ideas and

willingness to self-improvement to be able to successfully organize and implement the project that would raise students' interest and motivation and help them develop their creativity through critical and analytical work with information and search for new problem solutions as well as solutions for project results presentation.

Conclusion

The project method of teaching is a perspective and effective tool in

modern pedagogy. The project-based learning is always focused on independent activity and results in conditions of real problems, which gives the opportunity to reveal personal potential of students that allows to form necessary competencies – independence and creativity that allow students to be successful and ready to compete in the labor market in future.

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Проектный метод обучения как способ развития самостоятельности и креативности

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Аннотация

Целью исследования является исследование понятия проектного метода обучения как эффективного способа развития самостоятельности и креативности студентов. Автор исследует теоретические аспекты проектного метода, а также особенности и условия его внедрения в образовательный процесс. В исследовании рассматриваются теоретические основы проектной деятельности, методика успешного внедрения проектного метода обучения в образовательный процесс, а также значение проектного метода обучения для формирования самостоятельности и креативности студентов. Особое внимание уделяется роли преподавателя в организации эффективной проектной деятельности, способствующей активному участию студентов в проекте, повышению мотивации к работе над проектом.

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Результаты данного исследования подтверждают, что проектный метод обучения способствует лучшему усвоению учебного материала, а также развитию самостоятельности и креативности учащихся, тем самым формируя необходимые в современном мире компетенции.

Для цитирования в научных исследованиях

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Ключевые слова

Проектный метод обучения, проектное обучение, самостоятельность, креативность, решение проблем, образовательный процесс, компетенции, инновации.

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