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Theoretical and Empirical Aspects of Project Activity at Modern Russian School

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Abstract

Due to democratization processes in Russia the search for new methods and forms of education has resumed. In recent years the "Project Method" introduced by American teachers and actively used in the 1920s at Soviet schools but then abandoned in the 1930s has gained large expansion. Currently the project method is developed in terms of pedagogics well enough, but still lacks a clear psychological foundation. In the paper, we viewed the process of formation of ideas about comprehensive cognitive operations, in particular, generalization, analysis, synthesis etc., as a psychological ground for using the project method. The theoretic research was complemented by trial and experimental research of generalizing character. For 4 years Yelets State Ivan Bunin University has held project contest in mathematics among schoolchildren of 5-11th grades. In order to hold the contest, the relevant methodological basis has been developed (contest statutes, project requirements, assessment criteria). The contest results have allowed revealing both advantages and disadvantages of using the project activity that should be taken into account while organizing the education process at school of the future.

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1. Introduction

Reforms in education system which took place in the Russian Federation pushed scientists to development of new pedagogical technologies. With regard to this, implementation of project technology to education institutions has become active. According to the new federal state education standards, students have to be engaged into project activity as early as in elementary school.

However, historic experience shows that innovative forms and methods of education cannot replace traditional ones. With regard to this, it seems important to evaluate the prospects of applying project method in

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modern school estimating its advantages and disadvantages. Advantages of the method are obvious, but difficulties are studied much less. The method still lacks a clear psychological basis, there is no generalizing research of positive aspects of using the project method at schools across a large region, with the students' projects contest suitable to be used as one. It is the above mentioned problems that have determined the relevance of the topic of our study.

2. Objectives, methodology and research design

The methodological basis of research includes the theory of project method (Dewey, 1925; Kilpatrick, 1925; Polat, 2000; Chechel, 1998), ideas of combination of traditions and innovations during teacher training (Balyhina, 2002; Kolyagin, 2001; Sergeev & Serikov, 2013), the theory of intercivilizational borrowings in pedagogics and education (Kayumov, 2014).

In order to meet the objectives we have applied a complex of **research methods**, including theoretical analysis of psychological, pedagogical, legal and program-methodological documents on the topic of research, qualitative and quantitative processing of experimental data.

The goal of research is to *determine the prospects of application of project method in modern school and reveal its advantages and disadvantages*. Within this goal, the following objectives were set: 1) studying the history of origin and application of project method; 2) developing psychological foundation of project activity; 3) trial and experimental work (project contest).

The research was carried out in 3 phases. The first phase (2010–2012) included analysis of sources and reconstruction of the problem history. We have developed didactic support for the project contest (contest statutes, objectives, project requirements, assessment criteria).

At the second phase (2011–2014), contests of projects in mathematics were held each year, the didactic support was improved, project assessment criteria were specified, and contest results were drawn up. In order to set foundation for project activity, the theory of formation of comprehensive cognitive processes was suggested. Strong and weak points of students' works presented for the contest were identified.

The third phase (2014–2015) saw the conclusions as for the prospects of using the project method in modern school. Based on psychological theory and contest experience, conclusions about successful application of the method in modern school were made.

3. Discussion of the research outcomes

The origin of project activity as a form of education dates back to the epoch of Enlightenment. In the XVII century, Czech teacher Yan Amos Komenskiy (1592–1670) noted that the main thing in education is for students to explore and study the objects themselves and not to "remember just other peoples' observations and explanations" (Komenskiy, 1893, p. 138).

At the end of the XIX century, Western teachers drew attention to emotional attractiveness of educational process within "pragmatic pedagogics".

The American teacher and psychologist John Dewey (1859 – 1952) pointed out disadvantages of the state-of-the-art school system: detachment from life, abstract, scholastic character of education process etc. Instead, he suggested upgrading school education, which attached fundamental importance to practical activity and personal experience of the child (D'juj, 1925).

Ideas of John Dewey were further developed in the works of his disciples and followers – American teachers E. Parkhurst (1887–1973), W.H. Kilpatrick (1871– 1965) (Kilpatrick, 1918; Kilpatrick, 1925; Parkhurst, 1922). John Dewey and W.H. Kilpatrick were colleagues and worked in teacher training college of Columbia University. According to Dewey's conception, the leading form of education had to become "project method", the core idea of which is for students to create "projects" by carrying out individual practical tasks. The teacher acts as a consultant. He identifies the problem, guides students' activity to the right direction, helps find information source, etc. During this process children have to plan, carry out, analyze, assess and solve the problem individually, i.e. engage in project activity.

The idea about result-driven direction of educational cognitive activity that could be obtained by solving some sort of practically or theoretically significant problem underlies the method. External outcome can be felt,

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