

СЕКЦІЯ 1

Методологічні та науково-методичні засади творення і функціонування систем навчання математики і особистість

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MATHEMATICS TEACHERS ABOUT ORGANIZING PROJECT ACTIVITY OF STUDENTS WHEN TEACHING AND LEARNING MATHEMATICS

Training future Mathematics teachers to the organization of students' project activity is an important relevant target landmark of their methodical training. We distinguish the concepts of "project activity", "design activity", "project method in teaching schoolchildren" according to [1]. To study the value attitude of Mathematics teachers working in high schools to the organization of students' project activity under current conditions, a survey of teachers was conducted. The questionnaire involves 125 respondents, 52% of whom work in city schools, 48% - in rural ones. The work experience as a Mathematics teacher varies: for 1-5 and 6-10 years (21%), 11-15 years (14%), 16-20 years (4%), 21-25 years (11), 26 years and longer (29%). In general, 88% of respondents agree that teaching Mathematics in modern school is impossible without project activity of students. The questionnaire shows that 80% of Mathematics teachers often or sometimes use project method in their work; the fact indicates the value and importance of project activity of schoolchildren in learning Mathematics. It should be noted that the percentage of those who use the project method is unevenly distributed among teachers according to their work experience. The teachers having 16-20-year and 21-25-year work experience often or sometimes use project method in their work (100%); the teachers having 1-5-year work experience do not use this method (13%). This fact shows that the latter group of teachers does not have sufficient methodical preparation for the organization of project activity for schoolchildren and is not able to use project method in teaching Mathematics. In support of this conclusion, 12% of them point out that they do not have sufficient knowledge about the essence of project methodology to use it in practice. The largest number of those who often use project method in their work (35%) is presented among the teachers having 11-15-year work experience. The teachers with work experience of more than 25 years always (19%) or sometimes (70%) use this method in Mathematics educational process. It is an indicative fact that all teachers who work more than 10 years, believe that they have sufficient knowledge about the nature of project method. In our opinion, this situation is due to the fact that less experienced teachers did not receive the necessary knowledge in higher school, and those who have longer period of teaching experience were able to improve their qualifications, in particular, in the direction of organizing project activities of schoolchildren.

Most respondents agree that project method helps students master the new ways of mathematical activity and learn new mathematical facts. However, it is less effective for learning new mathematical concepts. Concerning the expediency of using project method in teaching Mathematics for the students of different age groups, most respondents (66%) consider it expedient to use project method in senior grades. At the same time, 52% of respondents consider it to be efficient method of teaching the students of the 7th -9th grades, 23% of respondent – the students of the 5th -6th grades. Thus, there is a steady tendency in the value attitude of teachers concerning the expediency of using project method in high school. According to the respondents, the use of projects in the educational activities of middle school students is less effective. 90% of respondents show the importance of knowledge about the essence of project method. 70% of respondents consider the knowledge about the essence of

schoolchildren's project activity, its steps of performance, interdisciplinary links of educational themes in Mathematics, awareness of current educational Internet resources, the ways of motivating students for project activity to be of particular importance.

The respondents were asked to rank (in points from 0 to) the importance of mastering certain skills by future teachers to apply project method efficiently in the educational process. The results are shown in Table 1.

Table 1

Ranking (in points from 0 to) the importance of mastering certain skills by future mathematics teachers

Skill	Points
To formulate interesting and significant topic of educational project	4.73
To organize step-by-step independent work of students	4.66
To motivate students to discuss and create a project	4.64
To use simple examples to explain complex phenomena	4.61
To formulate a key issue of the educational project	4.60
To assess the results of students' project activity	4.58
To master a set of research methods	4.56
To organize the pupils' search of an optimal way to achieve the project goal	4.56
To assist students in analyzing and synthesizing the results of educational project	4.54
To form a group of students to work at the project	4.51
To choose the age group of students to perform a project on specific subjects	4.45
To formulate the didactic goal of a project	4.36
To seek partners to work at the educational project	4.26
To present the educational project outside the school	4.17

The focus of the additional attention in the survey was to find out what organizational work experience has to be gained by the students during their studies in higher school for the further successful application of project method in teaching Mathematics for schoolchildren. The results are the following: to be the member of the project in higher school (4.43 points), to be the member of the project in high school (4.29 points), to be attracted to managing students' research in Minor Academy of Sciences (3.92 points), to be attracting to seeking partners to perform project (3.89 points) and to various types of vocational guidance work in higher school (3.82 points).

References

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Анотація. Акуленко І.А., Жидков О.Е. Вчителі математики про організацію проектної діяльності учнів під час вивчення математики. У статті представлені результати анкетування вчителів математики щодо їх ставлення до організації проектної діяльності учнів.

Ключові слова: метод проектів, проектувальна діяльність учнів.

Summary. Akulenko I.A., Zhydkov O. E. Mathematics teachers about organizing project activity of students when teaching and learning mathematics The article presents the results of the questionnaire of teachers of mathematics on their attitude to the organization of project activity of students.

Key words: project activity of students

Аннотация. Акуленко И.А., Жидков О. Э. Учителя математики об организации проектной деятельности учащихся в процессе изучения математики. В статье представлены результаты анкетирования учителей математики относительно их отношения к организации проектной деятельности учащихся.

Ключевые слова: метод проектов, проектировочная деятельность школьников.