

Some Issues of Improving the Teaching of Geometry at School

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ABSTRACT

The article deals with some issues of teaching geometry in general secondary schools, the peculiarities of the use of pedagogical technologies. The article also discusses the formation of students' ability to independently prove geometric theorems, directing them to the skills of theoretical, practical, logical, inductive and deductive reasoning, improving the quality of knowledge, makes recommendations.

KEYWORDS: *geometry, pedagogical technology, geometric theorem, proof ability, theoretical, practical, logical, inductive, deductive conclusion*

INTRODUCTION

Within the framework of wide-ranging political and social reforms in the country, a large-scale work is being carried out to improve the quality of education in academic lyceums, the introduction of advanced pedagogical and information and communication technologies and e-learning resources in the educational process. On this basis, it is important to identify and find solutions to problems related to the application of pedagogical technologies in the teaching of geometry and the application of pedagogical technologies in the teaching of geometry.

LITERATURE ANALYSIS AND METHODOLOGY

To date, a number of scientific researches in the field of teaching mathematics have been conducted in all spheres of the education system of the republic, including general secondary education, academic lyceums and vocational education. In particular, such scientists as J.Ikramov, N.Gaybullaev, D.Yunusova, H.I.Ibragimov, N.Shodiev, M.Barakaev, B.Abdullaeva improved the methodology of teaching mathematics, M.Tojiev, A.Ortiqbaev, N.Jumaboev, Ch.E.Mirzaev, S.Alikhonov, I.Isroilov, Z.Pashaev Development of theoretical-methodical and practical aspects of teaching geometry in all directions of education, R.Kh.Juraev, F.Zokirova, U.Sh.Begimkulov, N.I. Specialists such as Taylakov, AA Abdukadirov, B. Ziyomammedov, J. Tolipova, M. Fayziev, T. Gofforova studied the use of pedagogical and information technologies in this area [1].

The analysis of the above research shows that the pedagogical basis for the formation of the ability to independently prove geometric theorems using pedagogical technologies in the teaching of geometry is not well developed.

DISCUSSION

One of the current problems in this system is to guide students to draw logical and deductive conclusions, to develop the ability to independently prove theorems in the teaching of geometry. The interrelation of theoretical knowledge and practical skills on the educational material is of great importance in the formation of students' skills of logical reasoning, independent proof of geometric theorems.

In order to develop students' ability to independently prove geometric theorems, first of all, it is necessary to direct them to the skills of theoretical, practical, logical, inductive and deductive reasoning, to improve the quality of knowledge [2].

Qualitative indicator of the formation of students' ability to independently prove geometric theorems implies understanding the meaning of each geometric concept in the content of the theorem, distinguishing the concepts involved in its condition, drawing conclusions from the conditions based on previously mastered concepts and theorems.

The level of geometric knowledge of students in grades 5-6 is known leveling up and taking the first steps towards systematic knowledge.

Students will become familiar with geometric concepts, construct different geometric shapes, and have the ability to measure the lengths of segments, angles, and areas of individual figures. In 7th grade, a systematic course of geometry begins in the plane, and in 10th grade, in space [3].

It should be noted that this does not take into account the psychological laws of thinking development. According to many psychologists, it would be expedient to study spatial figures and their properties earlier. There are two different options for implementing this idea:

As part of the course "Mathematics" from the elementary school, students are introduced to geometric shapes in a visual form through a system of special exercises and assignments. At the same time, the formation and development of spatial perceptions and logical thinking take place;

Appropriately early study of a systematic course of geometry in grades 5-6, taking into account the age characteristics and experience of students. At the same time, it is advisable to start developing the skills of logic and argumentation.

Why is so much emphasis on teaching math in grades 5-6? Since the mathematics course in grades 5-6 is the basis of all mathematics education, teaching in these grades provides cognitive motivation, forming a system of educational and cognitive motives. According to many psychologists, it is in these classes that different types of thinking begin to actively develop: logical, mathematical, spatial, critical, and so on. If students are more involved in applied math in elementary grades, in grades 5-6. they work with abstract numbers, new types of numbers appear (fractions and negative numbers), get acquainted with the concept of variables and methods for solving linear equations, develop the ability to make geometric and measurements, lay the foundation for starting systematic calculations. geometry course.

Numerous studies show that the mathematical knowledge and skills of school children are declining. Therefore, looking for ways to improve the learning process and program

material content for grades 5-6 is a serious challenge.

It is difficult for a teacher to keep students' attention throughout the lesson. Strong mental labor, numerous identical calculations, or algebraic changes tire students.

It is known that in such cases it is expedient to use the popular universal method of transition from solving algebraic examples to geometric material.

The following main pedagogical factors are an important tool in improving the methodology of teaching geometry in school education:

focusing didactic learning objectives on shaping students' knowledge and skills, such as theoretical, practical, logical, and reasoning;

systematization of the content of geometric learning materials (with the results of each stage);

stratification of teaching materials and assignments in geometry in accordance with the level of mastery of students;

formation of geometric learning materials on the basis of interactive methods;

use of modern information technologies in teaching geometry;

identification of pedagogical criteria necessary to determine the performance of students;

development of geometric teaching materials based on the principles of technological approach.

CLEAR CONCLUSIONS AND PRACTICAL SUGGESTIONS

Geometry is not necessary for students to learn and remember certain geometric terms and facts, but primarily to develop their logical and spatial thinking, thinking, reasoning, and reasoning skills. Such skills are primarily formed and developed in geometry classes. In all other lessons, including algebra, students work according to certain rules, patterns, and algorithms.

In solving geometric problems, we have to look for a different way, a different solution plan each time.

Currently, in some schools, starting from the 5th grade, the introduction of clubs such as "Fine Geometry", "Mathematics and Design" in schools will solve the problem to some extent.

LIST OF REFERENCES

- [1] Турдибоев Д.Х. Академик лицейларда педагогик технологияни қўллаб, геометрияни ўқитиш методикаси ва амалиёти 13.00.02 – Таълим ва тарбия назарияси ва методикаси (математика) Педагогика фанлари бўйича фалсафа доктори (PhD) диссертацияси автореферати Самарқанд–2019.
- [2] А. Азамов ва бошқалар. Геометрия. Дарслик 7-синф. "Yangiyo'l poligraf servis", 2009, 2013, 2017.
- [3] Джураева Б.Р. Формирование педагогической культуры будущих учителей в процессе изучения дисциплин педагогического цикла: автореф. ... канд.пед.наук. – Т.: 2002. – С. 11-14.
- [4] Азизходжаева Н.Н. Педагогик технология ва педагогик маҳорат. – Т.: Фан ва технологиялар нашриёти, 2006. – 186 б.

