

E. Shumilo,
Student,
O. Mykhailova,
PhD (Education), Associate Professor,
Zhytomyr Ivan Franko State University

THE EFFECTIVENESS OF MATHEMATICAL TOOLS USAGE FOR TEACHING PRIMARY SCHOOL PUPILS

Mathematics as a school subject has sufficient potential for the formation and development of the qualities that a person needs in order to be successful in modern life. Changing the training requirements of future professionals has led to the search for ways to improve the effectiveness of training, which will yield the best learning outcomes. The quantity and quality of the tools that a teacher can use to successfully solve educational problems is increasing, which in turn attracts attention to this topic.

Yu. N. Bibik, S. Goncharenko, V. Onishchuk, O. Savchenko, M. Fitsula, S. Shapovalenko and others are emphasizing the need to use a variety of learning tools besides the textbook. These studies analyze the approaches to the usage of learning tools in practice. According to the first one: the development of teaching aids is not teaching. In this position, the means of education are equated with the usual means of clarity and control that create a well-known comfort that can be dispensed with. Proponents of this theory claim that they have enough boards and chalk to teach.

Another approach absolutizes the role of learning tools, which are seen as the primary and only means of achieving the goal, and the rest of the components (methods, organization, etc.) must be appropriate and conditioned by the specificity of learning tools. The exaggeration of the role of learning tools can also be seen as a negative reaction to the first approach, which denies their importance and influence on the quality of knowledge and the mental development of students.

The third position is that the learning tools are considered first and foremost in the system of activity of teachers and students. They perform certain functions and provide (along with other components) the quality of knowledge and the intellectual development of the students defined by them. It is this thought that is widespread and in line with basic ideas in modern education [1, p. 210].

The purpose of the article is to analyze the means of teaching mathematics in primary school and the feasibility of their usage.

The learning tool is an object of any nature (material or ideal object), which has a didactic character, replaces in whole or in part the concept being studied, gives new information about it [2]. Mathematical tools include: mathematics textbook, printed notebooks, didactic materials and reference mathematical literature, teaching equipment, including visual aids, models, drawings, diagrams, tables, objects, tools, devices, on-screen training tools, calculators, personal computers appropriate pedagogical software. Therefore, learning tools are peculiar tools of the teacher and the tools of cognitive activity of children. Learning tools are the most effective when they become an organic element of the learning process, ensuring the achievement of the learning goals [1, p. 218]. Working with various means of teaching mathematics, the

child does not only consolidate the knowledge of the subject, but in some cases, can go beyond the requirements of the program, slowly prepare for its assimilation.

Thus, learning tools play an important role. Namely, they perform such functions as: 1) information; 2) the adaptive function; 3) the compensatory function; 4) the managerial function; 5) the integration function; 6) the interactive function; 7) the motivational function [3].

The experience of advanced educators and experimental studies (L. Vygotsky, P. Halperin, I. Koloshin, etc.) have shown that the intensity of mental development depends on whether the learning tools are provided in a ready form, or are the students designed with the teacher in the classroom. The creation of learning tools contributes to the developmental effect and higher quality of pupils' knowledge than their pattern-based use [1, p.219].

Some researchers, based on the analysis of educational activities that take place in an environment where information and communication technologies are actively used, point to a change in the teacher-student relationship towards humanization, to create a relationship between teacher and child based on pedagogy of cooperation, with more the active role of the pupil in the learning process. And further, given the changes in the functions of information and communication technologies in teaching, they propose to include in the system the 'teacher-pupil' relation of the third component – the educational environment based on information and communication technologies [4].

Therefore, the implementation of modern mathematical for teaching pupil in the educational process makes it possible to organize the educational and cognitive activities of pupils at a higher level. The skillful use of mathematical tools for teaching pupils can significantly increase pupils' autonomy, expand the organizational ability to teach their individual and group work, develop mental activity and initiative in learning the material.

REFERENCES

1. Зайченко І.В. Педагогіка: підручник / І. В. Зайченко. О 3-тє видання,перероблене та доповнене - К.: Видавництво Ліра-К, 2016. - 608 с
2. Великий тлумачний словник української мови (з дод. і допов)/Уклад. і голов. ред. В.Т.Бусел. – К.; Ірпінь: ВТФ "Перун", 2005. – 1728 с
3. Малафіїк І. В.Дидактика: навчальний посібник / К.: Кондор, 2009.- 406 с.
4. Петухова Л.Є., Співаковський О.В. До питання про трисуб'єктну дидактику//Комп'ютер у школі та сім'ї. –2007. –№ 5. –С. 7-9.
5. Савченко О.Я. Дидактика початкової школи: Підручник для студентів педагогічних факультетів. – К.: Генеза, 2002. – 386 с.
6. Гончаренко С.У. Інтеграція наукових знань і проблема змісту освіти.//Постметодика. –1994. –№2. –С.2-3
7. <http://www.edudirect.net/sopids-806-1.html>
8. <https://cyberleninka.ru/article/n/suchasnii-stan-tendentsii-ta-problemi-rozvitku-osviti-v-ukrai-ni>