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## THE CONTENT AND ESSENCE OF THE CONCEPT OF PRACTICAL ASSIGNMENTS IN PRIMARY MATHEMATICS EDUCATION

**Abstract:** This article describes the methodological foundations for studying the problems of active joint practical tasks in primary mathematical education.

**Key words:** practical tasks, exercises, development, motivation, activity, mental activity.

**Language:** English

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### Introduction

In defining the content and essence of the concept of practical tasks, we have focused on such aspects as the rules and algorithms of actions formed in students based on the current program in solving most problems of the school mathematics course, the simplest research skills.

Research is considered as the study of the laws of origin, change, development of an object.

Experience, knowledge, and methods and techniques of object study are used in the research process. The result of research is the acquisition of new knowledge.

### Materials and methods

Regarding the process of teaching mathematics: to put the research problem among the main components of educational research, to understand its purpose, to pre-analyze the available information on the problem and the problem under consideration, conditions and methods of problem solving, to formulate and formulate initial hypotheses analyze and summarize the results, check the validity of the hypothesis on the basis of the obtained evidence, formulate new results, laws, properties, determine the

place of the results obtained on the problem in the existing knowledge system. Skills such as purposeful observation, comparison, hypothesis making, proof or refutation, and generalization play a special role in the formation of skills such as generalization.

Let us explain the concept of "practical assignments". This concept cannot be explained without relying on the concept of "exercise"[1].

Exercise is a sequence of actions performed in order to master an activity. Activities to improve the quality of an activity are also part of the exercise.

Normally, many repetitions of actions in the acquisition of knowledge, skills and competencies in education are also carried out as a result of exercise.

Exercise is a training to acquire and improve certain skills.

We analyze this sentence. We can distinguish the followings:

- Training;
- Acquisition and improvement of any skills.

If we apply the above to education, the exercises are first, the learning process; we learn that the second is the performance of exercises that follow specific didactic goals, so we define the concept of exercise as follows: "Exercises represent the process of teaching

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and learning, aimed at achieving the main goals of education”.

Part of the exercises are practical assignments. Therefore, they also retain all the features of the generalized term "exercise", but in turn have their own characteristics. Tasks with a practical content express the process of acquiring knowledge, accelerate the learning process through the development of mathematical speech, and serve to develop students' thinking and creative abilities. Only when practical assignments are presented in a certain system in the learning process can they successfully complete their tasks.

### Results and discussion

In developing a theoretical model of practical tasks in the developmental education system, we relied on the work of G.I. Sarantsev [107]. In this case, the author considered the concept of "exercise" on the basis of high school materials. He looked at the concept of exercise as a multifaceted phenomenon in the teaching of mathematics, showing its following main features:

- 1) shaping actions appropriate to the content of mathematical education;
- 2) a means of purposeful formation of knowledge, skills and competencies;
- 3) methods of organizing and managing students' learning activities;
- 4) one of the forms of implementation of teaching methods;
- 5) a tool that connects theory with practice [2].

Based on this recommendation, we looked at the practical tasks from different aspects of the learning process: content, methods, teaching aids, learning activities.

Usually, the main attention in didactics is focused on the selection of the content of education, which should be considered, to determine the sequence, intelligibility, structure of its expression. It should be noted that no matter how carefully selected and suggested the training material is, it will not be able to ensure effective mastery of the material on its own. To do this, it is necessary to carefully choose the same teaching aids, that is, to choose teaching methods that allow you to master the content of the given knowledge. It is impossible to acquire knowledge effectively without special organization of educational activities. Practical assignments are one of the ways to organize mastery, to identify the necessary intellectual behavior and to ensure the acquisition of knowledge. In this case, it is important to take into account not only what content of knowledge is acquired, but also how it is acquired, that is, how it provides cognitive activity, under what pedagogical conditions it is manifested.

The effectiveness of education is directly related to the level of activity of the student in cognitive activities, their independence in the process, which in

turn is determined by the interests of students. Research has shown that students' interest in learning depends not only on their age-related abilities, but also on their ability to generalize more skills.

Tasks of practical content have the ability to fulfill the above conditions. Because they include exercises that are able to take into account the interests and abilities of the volunteer learner. Exercises can be divided into four categories[3].

The first category of exercises includes:

- 1) Learning exercises;
- 2) Exercises on repetition of separate facts, numbers, and concepts;
- 3) Exercises for repetition of rules;
- 4) Exercises for repeating addition, multiplication, division tables;

The given exercises are more of an exercise involving phrases such as "which of the following", "what is this", and "what is it called".

The second category:

- 1) Tasks to determine the facts, measuring length, weight;
- 2) Exercises for counting and expressing methods and processes of action;
- 3) Exercises for the analysis and synthesis of states and processes;
- 4) Exercises on matching and differentiation (comparison and fragmentation);
- 5) Exercises on distribution (classification);
- 6) Exercises to determine the relationship between the facts (function, method, result, tool, etc.);
- 7) Exercises on abstraction, definition and generalization;
- 8) Solve uncomplicated examples.

The simplest mental activity will be required to perform the above exercises. Such exercises usually consist of phrases such as "compare," "find similarities and differences," and "in what way"[4].

The third category includes:

- 1) Transfer exercises (transmission, transformation);
- 2) Narrative exercises (interpretation, explanation of meaning and significance, justification);
- 3) Exercises on induction;
- 4) Exercises on deduction;
- 5) Proof and verification exercises;
- 6) Assessment exercises.

The exercises listed require complex mental processes. These include induction, deduction, interpretation, persuasion, etc.

The fourth category includes:

- 1) Problematic issues and situations;
- 2) Ask questions and formulate issues or exercises;
- 3) Exercises to find based on their own observations;
- 4) Exercises based on their own thinking.

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Doing these exercises requires independence. Usually, they start with the following words: think; focus your attention; determine based on your own observations and something like these. Now these exercises require the simplest processes. They need to be grouped into larger blocks, structures, so that they are new to students.

Thus, practical assignments serve the following purposes: diagnostic, predictive, and emotionally motivating.

According to the theory of knowledge, the source and driving force of the development of the intellect is contradiction. Therefore, the development of students' creative and thinking skills, cognitive independence is not possible without problematic situations.

The need to apply problem-based learning necessitated a study of lesson structure. M. I. Mahmutov concluded that the structure of the lesson should be considered at three levels: didactic, logical-psychological and methodological. He highlighted the following general didactic components of the lesson structure:

1. Activation of previously acquired knowledge and methods of action of students.
2. Formation of new concepts and ways of action.
3. By using skills and competencies[5].

Tasks of practical content are one of the elements of the lesson structure. They activate students' thinking skills; students' listening skills are developed when completing practical tasks. Practical assignments, along with other forms of work, allow

students to activate a variety of activities. For example, the speed of thinking, speech, actions are activated. All of these in turn shape skills and competencies.

Thus, in the structure of the problem-developmental lesson is characterized by the fact that the practical tasks have a place and can be used in all stages of the practical tasks. In this case, practical tasks appear as a means of activating the cognitive activity of students.

In understanding the essence of practical tasks, the research of Yu.K.Babansky, I.D.Zverov, V.V.Kraevsky, I.Ya.Lerner, M.N.Skatkin and others on teaching methods was fruitful. Our research has shown that in the process of teaching mathematics, practical assignments have emerged as a single form of the whole teaching group.

### Conclusion

Despite its abstract nature, mathematical knowledge has emerged under the influence of practice and is applied in practice. Therefore, teaching mathematics should definitely be done with real things, in connection with other subjects. It follows from the requirement that tasks of practical content serve as an important function, a means of carrying out the connection between theory and practice.

Now we can create a theoretical model of practical tasks. This model describes the learning process from all angles. The theoretical model of practical tasks serves to theoretically understand the tasks of practical content as a methodical process.

### References:

1. Babanskij, Jy.K. (1982). *Optimizacija uchebno-vospitatel'nogo processa*. (p.192). Moscow: Prosveshhenie.
2. Mahmutov, M.I. (1981). *Maktabda muammoli ta#limni tashkil kilish*. (p.185). Toshkent.
3. Sarancev, G.N. (1985). *Teoreticheskie osnovy metodiki uprazhnenij po matematike v srednej shkole*: Diss. . dokt. ped. nauk. (p.303). Saransk.
4. Xudoynazarov, E. M. (2019). Didactic possibilities of oral exercises in forming initial classes pupils' mathematical thinking activity. *Eastern European Scientific Journal*, Ausgabe – Germany.1-2019, pp.249-253.
5. Khudoynazarov, E., & Yarmetov, J. (2021). Application of problem-based teaching methods in the development of mathematical thinking skills of students. *Psychology and education* (2021) 58(1): pp. 4537-4541.
6. Madraximovich, K. E., & Ruzimovich, Y. J. (2021). *Application of Problem-Based Teaching Methods in the Development of Mathematical Thinking Skills of Students*. Annals of the Romanian Society for Cell Biology. pp. 43-47.
7. Khudoynazarov, E., & Yarmetov, J. (2021). Application of problem-based teaching methods in the development of mathematical thinking skills of students. *Psychology and Education Journal*, T. 58, №. 1, pp. 4537-4541.
8. Farxodjonova, N. F., & Abdurahimov, V. A. (2020). *Modern technologies of students training in higher education*. nauka i tehnika. Mirovye issledovaniya. pp. 5-7.

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---

9. Farxodjonova, N. F. (2019). *Modernization and integration: social-philosophical analysis*. Rol'nauki v formirovanii sovremennoj virtual'noj real'nosti.
10. Sodirjonov, M. M. (2020). Education as the most important factor of human capital development. *Theoretical & Applied Science*, (4), 901-905.