

СЕРТИФИКАТ УЧАСТНИКА

НАГРАЖДАЕТСЯ

Saydullayeva Saida Rahmanovna

*за публикацию в журнале
«Образовательный процесс»
с научной работой*

**«THE ROLE OF EDUCATIONAL TASKS IN THE TRAINING
PROCESS OF MATHEMATICS»**

*Руководитель Научного объединения
«Вертикаль Знаний» Барышов Д.А.
Россия, г. Казань*



5 июня 2018 года

ОБРАЗОВАТЕЛЬНЫЙ ПРОЦЕСС

ISSN 2587-6031

Периодическое издание

Выпуск № 6

Казань, 2018

**МЕЖДУНАРОДНЫЙ НАУЧНЫЙ
РЕЦЕНЗИРУЕМЫЙ ЖУРНАЛ**

"ОБРАЗОВАТЕЛЬНЫЙ ПРОЦЕСС"

**Выпущено под редакцией
Научного объединения
«Вертикаль Знаний»**



РОССИЯ, КАЗАНЬ

2018 год

Основное заглавие: Образовательный процесс

Параллельное заглавие: The educational process

Языки издания: русский (основной), английский (дополнительный)

Учредитель периодического издания и издатель: Научное объединение «Вертикаль Знаний»

Место издания: г. Казань

Формат издания: электронный журнал в формате pdf

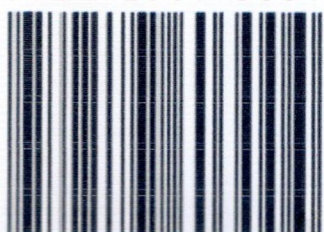
Периодичность выхода: 1 раз в месяц

ISSN: 2587-6031

Редколлегия издания:

1. Галиахметов Руслан Рузалевич - PhD, Казанский (Приволжский) федеральный университет.
2. Волкова Наталья Васильевна - канд. социол. наук, доцент, Казанский (Приволжский) федеральный университет.
3. Леонтьева Людмила Станиславовна - канд. филос. наук, доцент, Казанский (Приволжский) федеральный университет.
4. Халилова Татьяна Викторовна - канд. ист. наук, доцент, Казанский (Приволжский) федеральный университет.
5. Понарина Наталья Николаевна - д-р филос. наук, доцент, Кубанский государственный университет, филиал в г. Тихорецке.
6. Молчанова Елена Владимировна - канд. пед. наук, доцент, Кубанский государственный университет, филиал в г. Тихорецке.
7. Холина Ольга Ивановна - канд. социол. наук, доцент, Московский финансово-промышленный университет "Синергия".
8. Сальников Алексей Викторович - канд. ист. наук, доцент, Армавирский социально-психологический институт.
9. Пономаренко Карина Геворговна - канд. психол. наук, доцент, Северо-Кавказский институт бизнеса, инженерных и информационных технологий, г. Армавир.
10. Мишечкин Геннадий Валерьевич - канд. ист. наук, доцент, Донецкий национальный университет экономики и торговли имени Михаила Туган-Барановского, г. Донецк, Украина.
11. Халфина Регина Робертовна - д-р биол. наук, профессор, Башкирский государственный университет.
12. Шаяхметова Эльвира Шигабетдиновна - д-р биол. наук, профессор, Башкирский государственный университет.

ISSN 2587-6031



9 772587 603004 >

ВЫХОДНЫЕ ДАННЫЕ ВЫПУСКА:

Образовательный процесс. - 2018. - № 6 (8).

Оглавление выпуска

Стр. 5 Saydullayeva S.R.

The role of educational tasks in the training process of mathematics

Стр. 12 Akramova D.

Development of creative cognitive activity of students in foreign language lessons with new information technologies

Стр. 15 Qiryigitov B., Abduganiyev M.

The urgency of using information technologies in the system of technical and vocational education

Стр. 19 Imomov R., Abduhamidov A.

Development of competitiveness of national economy and enterprises in the economy of modernization of economy

Стр. 24 Muratova E.R.

Problems of improving the methodology for teaching foreign languages to students of non-linguistic specialties

Стр. 28 Qiryigitov B.

Creation of educational and methodological support for the development of creative imagination of students in computer science in higher education

Стр. 32 Кирйигитов Б., Абдуганиев М.

Интернет-протокол (ip) является основным протоколом на сетевом уровне модели OSI

УДК 378

THE ROLE OF EDUCATIONAL TASKS IN THE TRAINING PROCESS OF MATHEMATICS

*Saydullayeva Saida Rahmanovna,
Andijan mechane-building institute, Uzbekistan, Andijan
E-mail: bankgni@mail.ru*

Annotation: *In any modern system of general education, mathematics occupies one of the central places, which undoubtedly indicates the uniqueness of this area of knowledge.*

Key words: *mathematics, educational tasks, students, training, knowledge, lesson, process.*

Аннотация: *В любой современной системе общего образования математика занимает одно из центральных мест, что, несомненно, указывает на уникальность этой области знаний.*

Ключевые слова: *математика, образовательные задачи, студенты, обучение, знания, урок, процесс.*

It is often said that mathematics is the language of modern science. However, it seems that this statement has a significant defect. The language of mathematics is so widely spread, and it often turns out to be effective precisely because mathematics is not reducible to it.

Outstanding mathematician A.N. Kolmogorov wrote: "Mathematics is not just one of the languages. Mathematics is a language plus reasoning, it's like language and logic together. Mathematics is a tool for thinking. It concentrates the results of the exact thinking of many people. With the help of mathematics, one reason can be related to another. ... The obvious complexity of nature with its strange laws and rules, each of which allows for a very detailed explanation, are in fact closely related. However, if you do not want to use math, then in this huge variety of facts you will not see that logic allows you to move from one to another. "

Thus, mathematics allows us to form certain forms of thinking necessary for studying the world around us.

Of course, here there are certain boundaries, which can not be forgotten: much is determined by innate abilities, talent. However, it is possible to note a whole set of

factors that depend on education and upbringing. This makes it extremely important to correctly estimate the enormous untapped opportunities for education in general and mathematical education in particular.

The subject of the work is the content, forms and methods of teaching mathematics, which activate the thinking activity of students.

The practical significance of this work is the disclosure of the method of activating the mental activity of students in the lessons of mathematics.

Learning in the lessons of mathematics to solve art problems gives us an exceptionally favorable opportunity to form a certain mindset for students. The need for research activity develops interest in laws, teaches to see the beauty and harmony of human thought. All this is in our opinion the most important element of a common culture. An important influence is the course of mathematics on the formation of various forms of thinking: logical, spatial-geometric, algorithmic. Any creative process begins with the formulation of the hypothesis. Mathematics with the appropriate training organization, being a good school of constructing and testing hypotheses, teaches you to compare different hypotheses, find the best option, set new tasks, and look for ways to solve them. Among other things, she also develops a habit of methodical work, without which no creative process is conceivable. Maximizing the possibilities of human thinking, mathematics is its highest achievement. It helps a person to realize himself and form his character.

This is a small part of the large list of reasons why mathematical knowledge should become an integral part of a common culture and an indispensable element in the upbringing and education of a child.

The implementation of developmental instruction, the main characteristic of which is the activity and independence of students in all types of educational work, allows not only to comprehensively develop students, but also to interest them with the subject. In order to identify techniques for activating the thinking activity of students in the learning process, we must explore the possibilities of various forms and methods of teaching in solving this problem. In addition, in the content of teaching mathematics can include tasks that activate mental activity.

The term "task" finds its application, both in the most diverse branches of knowledge, and in everyday life. In the broadest sense, the term "task" can be understood as a proposal addressed to a particular subject and requiring fulfillment of certain actions from him. These actions can be of a very different nature. Speaking about assignments in the learning process, M.A. Danilov notes: "Sometimes it is believed that the driving force of the educational process is the teacher, his

explanations, directions, tasks. Such a concept of teaching clearly appears in the lessons of some teachers. They continually explain, point, command, and the pupils' share remains only imitative and executive functions. "

Such tasks carry on themselves an organizational burden and do not have a positive impact on the nature of mastering the subject. Moreover, as M. Danilov correctly points out, "such a lesson gives grounds to believe that the teacher represents the educational process only as with the permanently inhibited passive role of the students, so that the teacher every minute has to push them, move the learning process in his own words and gestures. "

But in addition to the above tasks, there are others, of which it can be said with certainty that the course of schooling in many ways depends on their nature. These are tasks that are closely related to the logic of the academic subject and which determine the mental and practical activities of students. Regarding such assignments, MA Danilov writes that if the proposed task causes the pupils' own desire to learn new, unknown and to apply what they have learned, one can think that the ability of the student to see the task, in seeking to find its solution, lies the secret of successful learning and mental development of schoolchildren. "All those changes in the minds and behavior of schoolchildren that occur in training are the result of the students' stress of thought, the result of their efforts in mastering knowledge, skills and skills in the implementation of educational and practical tasks."

Before proceeding to the direct characterization of study assignments in mathematics, it is necessary to clarify the understanding of certain terms in didactics, which correspond to the term "study assignment".

Exercise, cognitive task can be considered a variety of educational tasks, as they are used in the learning process with a certain didactic purpose. So the exercise sets the goal of mastering this or that skill. The term "exercises" is the most convenient in this sense, since, in fact, to train a certain skill, it is necessary to exercise, exercise, but in this case the exercise can be understood as an action (physical or mental) that arises under the influence of a task. Educational tasks that require students or imitation (the development of the ability to write a certain number or letter), or training in the application of knowledge, skills and skills acquired earlier under the guidance of the teacher, in conditions similar to those in which they were formed, it is appropriate to call exercises.

The cognitive task is also connected with a certain didactic purpose, its solution is drawn to the acquisition of new knowledge.

Depending on the activity carried out by the student in the course of the assignment, the following are most common: tasks that need to be imitated, when the teacher gives a sample of the task, accompanied by the necessary explanations, and the children follow the show and then reproduce, while striving to achieve the greatest similarity with the sample; tasks for training, requiring students to independently apply knowledge, skills and skills acquired earlier under the guidance of the teacher in conditions similar to those in which they were formed; tasks that require children to apply the knowledge they acquired earlier under conditions that are more or less different from those that occurred when they were formed; tasks that contribute to the manifestation in children of active thought, creativity (these are tasks that require students to independently obtain a new conclusion based on observations, analysis of the conditions for the performance of a task).

Taking into account the specifics of the course of mathematics in the initial classes, it is possible to identify types of tasks based on:

- memorizing the table of arithmetic operations;
- Possession of computational methods;
- the connection of a certain concept with one or another arithmetical action;
- Direct application of the necessary rule;
- the allocation of different and similar;
- the allocation of any pattern based on observations;
- indirect application of a rule;
- clarification of cause-effect relationships.

Here are the reasons that we were guided by having the types of tasks in the above sequence. For this purpose, let us analyze the activities of students, caused by each kind of task. Thus, the fulfillment of tasks of the first kind is based only on the activity of memory (the child learns, for example, the addition table and the subtraction table within 10 or remembers the order of the numbers forming the natural series, and on this basis performs the task proposed to him, counting or counting one at a time). A typical form of tasks of this kind: "Compute", "Solve an example", while the student is offered only in another order the same examples that occur in the table. The student simply remembers the table case required of him.

It should be noted at once that if in the educational process this type of tasks is performed most of the time, then training becomes only a training.

Tasks, which are based on the student's possession of a computing device, can be put on a higher level. Their implementation can no longer be based on

mechanical memorization, since a large variety, for example, of cases of addition and subtraction, the student is unable to remember. Mastering the methods of calculation requires, first of all, understanding and assimilating the digit composition of the number, on the basis of which most of the computational techniques are built.

To perform assignments for the allocation of a different and similar pupil, not only should a certain stock of concepts and terms exist, without which the comparison operation is of a formal nature, when the schoolchild allocates only the external similarity or difference of those or other objects, not only to establish those or other links, but also to be observant, and also to analyze the data obtained in the course of observation. Examples of such tasks:

- How are pairs of examples similar?
- What do you find similar and different in the equations?
- What do you find similar and different in the examples?
- Point out the similarity and difference of expressions:
- Point out the similarity and difference of expressions:
- What is the similarity and difference of pairs of numbers?

Tasks to identify any pattern on the basis of observations, as well as tasks to identify different and similar, require students to perform the most diverse activities: knowledge of computer skills, concepts, the ability to observe, analyze. But unlike the tasks of the previous type, where the student is directly indicated the method of performing the task (it is necessary to find a different and similar), in assignments of this type, such an indication is absent. The student should independently resort to observation, analyze the received data and generalize them. For example:

- How does the amount change in these examples? How does the summand change (To answer the question, how does it change ?, it is necessary to resort to comparison, only then it is possible to establish the regularity of the change in the sum)

- By what rule is a series of numbers written?
- Rewrite the numbers in ascending order.

Tasks that are based on the indirect application of the rule in addition to the various activities specified in previous assignments require the student also some cleverness, which is determined by the system of knowledge that has developed in the student, as well as his overall development. Therefore, the tasks of this type are more difficult for the student than the previous ones. For example:

- Is it possible to say, without calculating, whether the value of expressions in each column will be the same?

We put the tasks for the clarification of cause-effect relations at the highest level, because for their fulfillment the student must bring a number of logical arguments and make certain conclusions from them, which will serve as a justification for the actions performed. This kind of tasks is closely related to the previous one, but it requires a more coherent and accurate expression of the student's thoughts in the word.

- Why does the value of the amount change?

- Can the values of the unknown be identical in the equations? - In what equation will the value of the unknown be greater? Why?

Orientation to the above types allows all the variety of tasks in mathematics to be used in their more complex sequence, which contributes to the manifestation of the diverse activities of students and has a positive impact on their development.

Thus, the selection of types of study assignments is based on the study of the thinking activity of schoolchildren. This is probably the most effective way to make the study assignments not only a means of mastering knowledge, skills and skills, but also a means of developing students.

References:

1. Бантова М.А., Бельтюкова Г.В. Методика преподавания математики в начальных классах. – М.: Педагогика, 1984. – 301 с.
2. Волошкина М.И. Активизация познавательной деятельности младших школьников на уроке математики. // Начальная школа. – 1992. - № 9/10. – С. 15-18.
3. Истомина Н.Б. Методика обучения математике в начальных классах. – М.: Издательский центр «Академия», 1998. – 288 с.
4. Сластенин В.А., Исаев И.Ф. Шиянов Е.Н.и др. Общая педагогика: Учеб. пособие для студ. высш. учеб. заведений / Под ред. В.А. Сластенина: В 2 ч. - Москва: Гуманит. изд. центр ВЛАДОС, 2003. – Ч. 1. – 288 с.
5. Ходиев Б.Ю., Голиш Л.В. Способы и средства организации самостоятельной учебной деятельности. Учеб.-метод. пособие для студентов. – Ташкент:ТГЭУ, 2007. – 94 с.
6. Эрдниев П.М., Эрдниев Б.П. Теория и методика обучения математике в

начальной школе. – М.: Педагогика, 1988. – 208 с.

7. www.nsportal.ru – Социальная сеть работников образования

ОБРАЗОВАТЕЛЬНЫЙ ПРОЦЕСС

Международный научный рецензируемый журнал

Выпуск № 6 / 2018

Подписано в печать 05.06.2018

Рабочая группа по выпуску журнала

Главный редактор: Барышов Д.А.

Верстка: Сятынова А.В.

Корректор: Хворостова О.Е.

Издано при поддержке

Научного объединения

«Вертикаль Знаний»

Россия, г. Казань

Научное объединение «Вертикаль Знаний» приглашает к сотрудничеству студентов, магистрантов, аспирантов, докторантов, а также других лиц, занимающихся научными исследованиями, опубликовать рукописи в электронном журнале «Образовательный процесс».

Контакты:

Телефон: +7 965 585-93-56

E-mail: nauka@znanie-kzn.ru

Сайт: <https://znanie-kazan.ru/>