



Effectiveness of the Use of Information Technologies in Fulfilling Creative Tasks in Primary School Mathematics

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Abstract: *This article discusses the topic of working on creative assignments using information technology in elementary school math classes. The types of assignments that develop students' thinking are revealed. The effectiveness of such tasks in the student's activity, in particular, the development of abilities and thinking, is reflected.*

Keywords: *information, technology, educational informatization, e-textbooks, multimedia, didactic task, assignment, creative task, assignment, problems, logical problem, problem problem, expression*

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The growing demand for information in human activities and the increase in the flow of information will lead to an increase in new information technologies. This requires the use of electronic media to work with information, as well as traditional information technologies that use traditional media (paper, film). Information is all the information that a person receives through the senses. Information is derived from the Latin word "information", which means information about an explanation, narration or event. By information we mean any information that we receive and understand from the environment (nature or society) through our sensory organs (eyes, ears, nose, mouth, skin).

Information comes in many forms and can be divided into the following types:

Text information;

Graphic information;

Audio information;

Video information;

Specific information;

Digital information.

Technology is derived from the Greek word *techne* - art, skill, learning, technology is a system that regulates the methods of obtaining, processing and processing a particular object in all areas, and the development of these methods is a science that deals with output, introduction, and

improvement. Information technology is the technology of data management and processing. Generally, this term refers to computer technology. In the field of information technology, work is carried out on the collection, storage, protection, processing and transmission of various information through computers and computer networks.

Informatization of education - a set of measures to change the pedagogical process based on the introduction of information products, tools, technologies in the educational process.

Informative teaching should be viewed in the context of a new approach to the organization of education, rather than as the use of computers and other electronic means.

Electronic textbooks are one of the main means of information, the content of which can be interpreted as an example of elementary mathematics:

Text information. It can consist of rules, facts, and the text of the report, including a description of the new topic.

Table. This includes not only illustrations and photographs, but also tables, diagrams, graphics.

Audio and video materials. This section includes an audio recording of the topic, a set of presentations, and multimedia showing how to work on the problem and assignments.

Assignment block. This includes tests and open-ended assignments. It is important that the e-textbook has fields for entering answers, checking and analyzing them, and pointing out mistakes.

Data block. There should be links to additional materials, online libraries and other sources of information.

The most important task of a teacher is to teach the younger generation to live in the world of information, to find and use the necessary knowledge. To successfully solve this problem, every teacher in the Information Society needs:

in-depth knowledge of the processes taking place in the educational process;

prompt and continuous updating of professional knowledge;

be able to master and use new technologies that are constantly expanding;

increase computer literacy and information culture;

collect, evaluate, modify and use the information obtained to improve teaching methods;

close and effective work with other participants in the learning process (administration, teachers, students, parents);

theoretical understanding of the results of their activities;

to have extensive knowledge.

Consequently, the effectiveness of education directly depends on the level of teacher training. With the transition to a new information society, the requirements for the professional level of a teacher will increase. The use of information technology multimedia software in primary education is effective.

Multimedia is a technology that describes the development, use and application of various types of information processing tools. It is an information resource created on the basis of various types of data processing and presentation technologies, as well as a computer program related to the processing and presentation of data. In other words, a special generalizing type of data that combines traditional static visuals (text, graphics) and different types of dynamic data (speech, music, videos, animations, etc.).

Multimedia objects are used for:

enhancing the pedagogical impact on students by creating additional emotional or mnemonic connections;

presenting unimaginable visual and auditory images and objects in the classroom;

describe and demonstrate observable events;

the ability to develop the required skills in simulators (e.g., during pilot training).

Multimedia lessons help to solve the following didactic tasks:

1. Acquisition of basic knowledge on the topic;
2. Systematization of the acquired knowledge;
3. Formation of self-management skills;
4. Forming motivation for learning in general and computer science in particular.
5. Provide educational and methodological assistance to students in working independently on the material.

Simultaneous use of audio and video data increases memorization by 40-50%. Multimedia programs provide information in a variety of forms, thereby making the learning process more efficient.

The average time savings for learning a particular material is 30%, and the knowledge gained is stored in memory much longer. Organizing multimedia lessons is both fun and high quality for primary school students. The use of multimedia tools, especially in primary school mathematics, not only gives good results, but also expands the imagination of students, increases their interest in science.

The development of thinking skills in mathematics lessons and the formation of the skills and competencies necessary for students to successfully apply the acquired knowledge in future conscious activities should become the main tasks of primary mathematics education. In this regard, the teaching process has its own characteristics of teaching methods of solving mathematical problems, including vital ones, based on their accumulated experience, and their application. The use of them in revealing the content of education and the essence of the concepts studied, teaching in interaction and in combination with the experience of students' practical activities is a topical issue. The development and implementation of these methods will improve the quality and effectiveness of teaching. One of the main goals of teaching mathematics in primary education is to develop students' abilities and interests based on the formation of their intellectual thinking. This means that creative assignments are important in the primary grades, so it is important to expand the scope of such assignments.

The term "task" is a rich, broad concept that is an adequate category for the term "task." The concept of "assignment" has been briefly defined by a number of researchers, and the task is:

- engine (S.L.Rubinstein);
- goal (A.N.Leontev);
- problematic situation (Y.A. Ponomarev);
- educational tool (N.F. Talizina);
- Barrier to consciousness (L.M. Friedman);
- Form of educational material (OR Rozikov).

None of these meanings of the term "assignment" can be denied. Indeed, each of the authors has defined it in terms of a specific aspect of the concept of 'assignment': S.L. Rubinstein understood this concept in terms of social experience, A.N. Leontev approached the realization of human goals. Y.A. Ponomarev problematic situation, N.F. While Talizina approached the task from an educational point of view, L.M. Friedman's ability to construct an assignment through speech (oral and written), O.R. Rozikov considered the task as an opportunity to change the teaching material.

The term "assignment" is a general, meaningful, multifaceted category used in the fields of psychology, didactics and mathematics. From it at all levels of education (preschool, primary education, general secondary education, college, etc.), at all stages of mastering (teaching the teaching material and reinforcement, repetition and skill building, generalization of knowledge and skills, control of learning outcomes, etc.). We divide the learning tasks into two groups, depending on what they are designed for (knowledge and thinking):

recall tasks;

creative (thinking) tasks.

Problems with non-standard solutions

The advantage of such learning tasks is that they develop the student's logical thinking, develop the ability to think independently, increase interest in the science of mathematics, the difficulty in the process of finding a solution to the problem, a sense of difficulty, goal-orientation, serves the task of cultivating such qualities as patience, resourcefulness.

Geometrik mazmundagi ijodiy topshiriqlar.

Boshlang'ich sinflarda geometrik mazmundagi ijodiy topshiriqlarni bajarishdan maqsad "o'quvchilarni geometrik figuralar haqida, ularning elementlari haqida, figuralar va ularning elementlari orasidagi munosabatlari haqida, ularning ba'zi xossalari haqida tasavvurlarning to'la tizimini tarkib toptirish" bilan birga o'quvchilarning bunday topshiriqlarni bajarishda ijodiy yondashishga o'rgatish, ularda mustaqil fikr yuritish ko'nikmasini rivojlantirishdan iborat.

Mantiqiy masala-topshiriqlar.

Bunday o'quv topshiriqlari o'quvchi tafakkuriga mo'ljallangan bo'lib, o'quvchining biluv faoliyatining rivojlanishiga katta yordam beradi. O'quvchi mantiqiy topshiriqlarni bajarar ekan, topshiriq yuzasidan mushohada yuritib, ma'lum hukm va xulosalarni chiqaradi. Mulohazaning real (chin) yoki yolg'on ekanligini aniqlaydi.

Masala: Dildoraning opa-singillari soni nechta bo'lsa, shuncha akalari bor. Uning singlisi Umidaning akalari opalaridan uch marta ko'p. Oilada necha o'g'il va necha qiz bor?

Muammoli masala-topshiriqlar.

Boshlang'ich sinflarda muammoli ta'limdan foydalanish ta'lim samaradorligini oshirishda muhim ahamiyat kasb etadi. Ijodiy mazmundagi topshiriqlarning bir turi bu muammoli masala-topshiriqlardir. Qanday masala muammoli masala bo'ladi? Bunday savolga I.G'.Ahmadjonov va L.Sh.Levenberglar «III sinfdagi masalalar yechish» deb nomlangan qo'llanmada quyidagicha munosabat bildiradilar: «... agar masalaning savoli o'quvchidan reproduktiv (esga tushirish) faoliyatnigina talab qilsa, u holda masala problemali (muammoli) xarakterda bo'lmaydi va bolalarning fikrlash faoliyatining rivojlanishiga kam yordam beradi. Agar masalaning savoliga javob berish uchun analiz, sintez, taqqoslash, umumlashtirishlarni bajarish zarur bo'lsa, ya'ni aqliy operatsiyalar bajarish talab qilinsa, u holda masala problemali (muammoli) xarakterga ega bo'ladi. Shuni ta'kidlash kerakki, bir masalaning o'zi bir o'quvchi (bo'shroq o'quvchi) uchun problemali bo'lsa, boshqa bir (kuchliroq) o'quvchi uchun hech qanday problema bo'lmasligi mumkin».

Ifoda, tenglama, tengsizliklar tuzish va ularni bajarishga oid topshiriqlar.

Boshlang'ich sinf o'quvchilari tomonidan ifoda, tenglama, tengsizliklar tuzish va uni bajarishga oid topshiriqlar o'quvchi tafakkuriga yo'naltirilgan ijodiy mazmundagi topshiriq ko'rinishlaridan biridir. Bunday turga mansub topshiriqlarni a) ifoda tuzish; b) tenglama tuzish; v) tengsizlik tuzishga ajratib tahlil qilish mumkin. Bunday topshiriqlarni o'quvchilar bajarishi uchun o'qituvchi so'zlar yordamida aytadi, o'quvchilar tinglab ifodani tuzishlari kerak bo'ladi.

Topshiriq: 120 va 52 ayirmasiga 45ni qo'shing. $(120-52)+45$;

42 sonini ikkita bir xonali son ko'paytmasi shaklida yozing.

Yuqoridagi guruhlariga bo'lib o'rgangan topshiriqlarimizning hammasi ijodiy topshiriqlarning tarkibiy qismi bo'lib, ularning har biri bola tafakkurini rivojlantirishga xizmat qiladi. O'qituvchida pedagogic mahorat, amaliyot takomillasha borgan sari, u ijodiy topshiriqlar tizimini samarali tuzish san'atini ham egallay boradi. O'qitish faoliyati predmeti vazifasida o'quv materiali qatnashadi. Ijodiy topshiriqlar tizimini tayyorlash jarayonida barcha o'zgarishlar o'quv topshirig'ida yuz beradi. U bilimlar tizimidan intellectual va amaliy o'quv topshirig'iga aylanadi, bir holatdan – bilimlar shaklidan amaliy ishlar tizimiga o'tadi. Ijodiy topshiriqlar tizimini tayyorlash jarayonida o'qituvchi e'tibor qaratishi kerak bo'lgan bir qancha jihatlar ko'zga tashlanadi, ya'ni ijodiy o'quv topshiriqlarining o'quv materiali mazmuniga tengligi, topshiriqlarning o'quvchilar yoshi, qiziqishi, real o'qish imkoniyatlariga mosligi, ta'lim jarayoni bosqichlariga teng kuchliligi, topshiriqlarning bir-biriga bog'liq bo'lishi, bir-birini to'ldirishi talab etiladi.

Xulosa qilib aytishimiz mumkinki, ijodiy topshiriqlar:

mustaqil fikrlash ko'nikmasini tarkib toptiradi;

mantiqiy tafakkurni o'stiradi;

topqirlikka, maqsad sari intilishga da'vat etadi;

fanga bo'lgan qiziqishini orttiradi;

o'quvchiga zavq bag'ishlaydi;

izlanuvchanlik qobiliyatini shakllantiradi.

Har bir mavzu maqsadidan kelib chiqqan holda darsliklardagi o'quvchi tafakkurini rivojlantirishga mo'ljallangan ijodiy mazmundagi o'quv topshiriqlari salmog'ini oshirish, ularni ma'lum tizim asosida osondan qiyinga, soddadan murakkabga o'tish tamoyiliga rioya qilgan holda bayon qilishni ta'minlash lozim.

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