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Methods of Using Information Technologies in Teaching Quantities to Primary School Students

Jalilov Muhammadali Abdumutalibovich

Associate Professor, Fergana State University, Uzbekistan

Mamirova Mehruzabonu Khurshidbek Qizi

Student, Fergana State University, Uzbekistan

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Abstract: This article discusses the importance of teaching quantities in primary school mathematics lessons, the role of the topic in the development of primary school students, and the advantages and benefits of using modern computer technologies to explain quantities in primary school lessons.

Keywords: Concept of quantity, animated explanation, information technologies, interactive presentation, educational platform.

Introduction: Primary school students should be taught to think creatively and create innovations from an early age. Each subject being taught, including mathematics, should be related to life, teaching how to solve real-life problems, which helps to develop mathematical thinking skills. Mathematics, in particular, forms the foundation of all exact sciences. A child who is good at this subject grows to be intelligent, broad-minded, and successful in any field.

Quantities play a significant role in enhancing the mathematical thinking, mathematical creativity, critical thinking, and logical reasoning of primary school students. There are specific guidelines in the State Educational Standards regarding the methodology of teaching quantities to primary school students.

All primary school teachers operate according to the State Educational Standards. According to the "Order No. 406 of the Minister of Public Education of the Republic of Uzbekistan, dated December 17, 2021," lessons must be organized based on the objectives and tasks of the subjects.

One of the key concepts studied in mathematics is the

concept of quantity. Without quantities, it is impossible to study nature, existence, or the universe. The concept of quantity enriches and reflects the understanding of the properties related to the measurement of things and events. As you know, the concept of quantity starts to be developed in children from the 1st grade. Naturally, children who have just entered school are not very stable in their actions. Therefore, the teacher must make the lesson interesting to achieve good results. If information technologies are used in comparison to traditional methods, the advantages of the lesson become even more effective. When teaching quantities in mathematics, using visual aids, explaining through graphs, animations, and diagrams, and linking the lesson with life and other subjects would be appropriate.

The process of teaching quantities to primary school students is of great importance in developing their mathematical thinking and problem-solving skills. Information technologies (IT) help make this process more effective and engaging. This article discusses how the use of information technologies in teaching quantities to primary school students can enhance the quality of education. In mathematics lessons, "Game-based problems" programs can be prepared and used. Various materials on many topics to be studied in primary school are provided. Tasks of varying complexity levels help develop each student's perception and creative abilities. Using animated computer slides to solve problems increases the interest in the lesson. Their advantages lie in the ability to go back to the beginning of the problem at any time, stop at different parts, converse with the students, and listen to their opinions. In primary school classes, animated problems and slide films can be used for motion. Animated images taken from the Internet can be used to create such slides.

Using various game-based programs in the process of teaching quantities to primary school students proves to be highly effective. In mathematics lessons, interactive exercises assist in teaching quantities, calculations, and geometric shapes, where children complete different practical tasks on computers.

By utilizing a variety of didactic material collections for primary school students, mixed computer programs can be created that include visual exercises, control exercises, and test modules. Using rich and diverse materials on quantities for the introduction of subject rules and general revision gives good results.

Through presentations, the process of creating questions and plans for the topic, as well as solving difficult problems, becomes easier. If the problem is written based on an image, displaying a related image on the screen helps children understand quantities better.

Information technologies, especially maps, graphics, and animations, make explanations easier. They are an interesting and effective tool for students, helping to capture their attention and reinforce their knowledge.

1. **Interactive presentations**

- Interactive presentations created using programs like PowerPoint or Google Slides can be used to provide information about quantities. The inclusion of examples, graphics, and videos on each slide can make the topic more engaging.

2. **Online learning platforms**

- Online platforms such as Khan Academy, Edmodo, or Nearpod can be used to create a variety of interactive exercises and tests for students. These platforms allow students to learn quantities independently and track their progress.

3. **Learning through games**

- Math games illustrated using information technologies (such as Mathletics or Prodigy) can make learning quantities enjoyable for children. The possibility of earning points for each correct answer increases competitiveness among students.

4. **Multimedia materials**

- By using video tutorials or animated materials, complex concepts can be explained simply. For example, including videos available on platforms like YouTube can indirectly increase students' interest in the topic.

5. Mobile Apps

o Mobile apps (such as Math Games or Photomath) provide children with the opportunity to complete practical exercises in a dynamic environment. These apps offer tasks of varying difficulty levels and allow for the assessment of results.

6. Virtual Reality (VR) and Augmented Reality (AR)

o Using VR and AR technologies, it is possible to present mathematical concepts with real-life examples. For example, AR allows students to examine the size of objects and engage in practical work with them.

The concept of quantity is related to measurable characteristics such as the number of objects, length, mass, volume, time, or other measurable properties. When explaining the concept of quantity, using PowerPoint, Prezi, or other presentation software, multimedia, and animated images can make the lesson more interesting and easier to understand for children.

Video lessons and cartoons are very helpful when

explaining the concept of quantity. Animated explanations on platforms like YouTube, Kids, TED-Ed help to capture children's attention and aid in understanding the topic. For instance: In primary grades, the concept of quantity is usually explained with simple and clear examples:

1. Examples of values expressed in kilograms.
2. How we measure length.
3. How we use units for liquids.

Students should collect information on their own and answer the given questions. For example:

1. What unit does Anvar use to measure apples?
2. Is 1 liter of milk correct or is 1 kg of milk correct?

Using information technologies when developing the concept of quantity enhances students' interest in the learning process and helps them to understand the topic more deeply. Interactive games, animations, video lessons, and mobile apps make the teaching process more effective. This process develops their logical thinking and creativity. Using information technologies in addition to traditional methods when teaching quantity concepts makes the lessons more understandable and engaging.

When teaching units such as liters, kilograms, and centimeters along with numbers, visual and interactive materials are of great importance. Sometimes, students find it difficult to imagine these concepts, so using real-life examples and technological tools increases the effectiveness. For example, interactive games and animations can be used to demonstrate the volume of 1 liter or the weight of 1 kilogram. Virtual experiments and multimedia materials help children not only understand quantities but also apply them in real life. Therefore, teachers need to effectively use information technologies in the classroom. This will not only increase students' interest but also help them solidify their understanding of the topic. Using information technologies in the teaching of quantities to primary school students simplifies the learning process and also encourages active participation. Teachers should use these tools effectively to make lessons more attractive and enhance children's interest in mathematics. In this way, opportunities are created to improve the quality of education by using modern information technology methods.

CONCLUSION

In general, if the teacher uses information technologies effectively and correctly, it increases students' interest in the lesson, their desire to acquire knowledge, and boosts their self-confidence. Additionally, their ability to think independently will develop. The teacher also facilitates achieving the objectives set for the lesson. However, information technologies should not be considered the main component of the teaching process, but rather a tool that helps convey new information and concepts to students in a clear and convenient way. The teacher remains the main guide and controller of the lesson process at all times.

REFERENCES

O‘zbekiston Respublikasi Prezidentining 2020-yil 6-noyabrdagi “O‘zbekiston yangi taraqqiyot davrida ta’lim-tarbiya va ilm-fan sohalarini rivojlantirish chora-tadbirlarini to‘g‘risida”gi PF-6108-son Farmoni.

O‘zbekiston Respublikasi Prezidentining 2018-yil 5-sentyabrdagi “Xalq ta’limi tizimiga boshqaruvning yangi tamoyillarini joriy etish chora-tadbirlari to‘g‘risida”gi PQ-3931-sonli Qarori.

Ahmedov M.1-sinf matematika darsligi. Toshkent-2018

Bikbayeva N.U. “Boshlang‘ich sinflarda matematika o‘qitish metodikasi”. T: O‘qituvchi,1996-yil

Olimov Q.T. Maxsus fanlar bo‘yicha elektron darsliklarni yaratishning uslubiy asoslari. G‘G‘ Kasb-hunar ta‘limi №2. 2004-yil.

Rasulov O. Zamonaviy elektron darsliklarning didaktik xususiyatlari Kasb-hunar ta‘limi. №5. 2005-yil.

Yo‘ldashev J. G., Usmonov S.A. Zamonaviy pedagogik texnologiyalarni amaliyotga joriy qilish. – T: Fan va texnologiya, 2008.

Olimov Q.T. “Maxsus fanlar bo‘yicha elektron darslilarni yaratishning uslubiy asoslari”.

Almara'beh, H., Amer, E.F., Sulieman, A., 2015. Multimedia ta'lim samaradorligi

Ta'lim vositalari. Int. J. Adv. Res. Hisoblash. Sci. Software Eng. 5 (12), 761–764.

“Multimedia ilovalarining turlari” http://tami.uz/

www.arxiv.uz

www.ziyonet.uz