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Technology For Increasing Mathematical Literacy In Primary School Students

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Abstract: It is today's demand to make the lessons interesting and easy with new technologies for the formation of the child's mathematical literacy, cognitive activity, and interest in logical issues. It was mentioned about the method of explaining to students that mathematical knowledge is the basis for learning all knowledge.
Key words: Junior school age, cluster technology logical problems, mathematical crosswords, mathematical riddles, mathematical ingenuity.

Kichik Maktab Yoshidagi O'quvchilarda Matematik Savodhonligini Oshirish Texnalogiyasi

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Annotatsiya: Bolaning matematik savodhonligi, bilish faolligi, mantiqiy masalalarga bo'lgan qiziqishni shakllantirish uchun yangi texnalogiyalar bilan darslarni qiziqarli va oson o'tish bugungi kun talabi . Matematik bilimlar barcha bilimlarni o'rganishga asos bo'lishini o'quvchilarga tushuntirish metodikasi haqida so'z ketgan.
Kalit so'zlar: Kichik maktab yoshi, klaster texnalogiyasi mantiqiy masalalar, matematik krasvordalar, matematik topishmoqlar, matematik topqirlik.
Аннотация: Сегодня существует потребность сделать уроки интересными и легкими с помощью новых технологий формирования у ребенка математической грамотности, познавательной активности, интереса к

логическим вопросам. Было упомянуто о методе объяснения студентам того, что математические знания являются основой усвоения всех знаний.

Ключевые слова: младший школьный возраст, кластерная технология логических задач, математические кроссворды, математические загадки, математическая изобретательность.

Introduction

The article presents the results of our research on some aspects of the formation of students' mathematical literacy. By providing a working definition of mathematical literacy, the study identifies four components of mathematical literacy. To increase students' interest, giving them mathematical crosswords and logical problems in every lesson, together with improving their mathematical literacy in time, will attract their interest and attention. Usually, mathematics lessons seem difficult for students, because the methods of working with mathematical example problems are explained in an unclear manner, which leads to a decrease in the student's motivation for mathematics. The formation of each component of mathematical literacy is determined by its structural features.

The characteristics of the first component are the acquisition of special and general educational cognitive knowledge, abilities, skills and methods of educational activity, teaching methods of the program.

The second component is determined by the ability to quickly and widely generalize mathematical objects, relationships, actions, adjust the thinking process freely, move from direct thought to inverse thought, consistent, correct, separated logical thinking, formalized perception of mathematical material, problem structure.

The characteristics of the third component are the ability to formulate and write problems in the language of mathematics, the results of solutions, etc.

The fourth component is expressed in the implementation of the previous components in life situations. Literature review (Literature review). The article presents the results of our research on some aspects of the formation of students' mathematical literacy. We believe that students who have academic competencies and know how to learn mathematics will be mathematically literate. Currently, one of the main tasks of education is the development of students' academic competencies. A student's academic competence is a necessary condition for him to learn mathematics, and the second is one of the

sufficient conditions for his mathematical literacy. According to the research results, the following components of mathematical literacy are defined: • formation of educational and cognitive competencies; • establishing connections and combining materials on various mathematical topics necessary to solve the task; • acquire the culture of mathematical speech; • Using mathematics to solve a wide range of life problems.

ANALYSIS AND RESULTS

One of the most important tasks of teaching mathematics is the formation of students' mathematical speech culture. The students' ability to explain the educational material, ultimately the development of mathematical skills depends on the successful solution of this problem. The use of mathematical tools to solve problems encountered in life situations is carried out, if necessary, through the ability to use education and cognitive competencies; to have the experience of perceiving the picture of the world, recognizing the problems that arise in the surrounding reality and can be solved with the help of mathematics; striving for clarity, simplicity, economy and rationality of the solution. The main problem of the teacher is "to search for means and methods of development of educational competences of students as a condition for ensuring high-quality mastering of the program". In this study, the content of the audit is grouped around some common types of events or problems that arise when reviewing these events. The following are proposed as such phenomena: quantity, space and form, change and dependence, uncertainty. One of the important aspects of mathematical literacy is the use of mathematics in various situations related to personal and school life, local community, social life, work and leisure.

RESEARCH METHODOLOGY

Mathematical literacy is defined as a person's ability to formulate, apply and interpret mathematics in various contexts. Mathematical literacy allows a student to perform, understand and apply mathematical concepts not only in the classroom, but also in everyday life. A learning method that can be used as a solution to improve students' mathematical literacy skills is needed. Contextual learning is a method that helps teachers connect students to the real world. By using contextualized teaching and learning, teachers can help students improve their mathematical literacy. Through theoretical research, this article attempts to describe some contextual teaching and learning components for improving students' mathematical literacy. It turns out that the literature confirms the existence of a relationship between the stages of learning and the

components of contextual teaching and learning with some indicators of mathematical literacy.

Modern society sets new requirements for the level of professional training of the future teacher. In modern education, mathematics is an element of general culture, functional literacy and everyday use. It is necessary to improve mathematical abilities in various forms in all categories of the population. This competence in society can be represented as a pyramid, at the top of which is a small group of specialists involved in the creation of the main elements of modern world mathematics, and at the bottom is the entire mass of the population with mathematical literacy. culture is an integral element of social, personal and professional competence. The main participant and factor of the mathematical education system is the teacher-mathematician. He should not only have mathematical knowledge in the form of a collection of definitions and proofs that can be reproduced and transmitted to students, but also, first of all, be ready to solve new, previously unseen tasks in the relevant fields, to give students a mathematical model of activity must be. From the point of view of international competitiveness and ensuring the quality of local education, the State program envisages the places that our students will occupy according to the results of the three most common systems of international tests. They evaluate the quality of schoolchildren's mathematics, natural and scientific training, the ability to read and understand texts, as well as the functional literacy of schoolchildren, that is, the ability to apply knowledge in extracurricular situations. In general, our schoolchildren receive strong science knowledge, but often lack the skills to apply it to real-life situations. Mathematical literacy is a person's ability to identify and understand the role of mathematics in the world in which they live, to express sound mathematical reasoning, and to use mathematics to meet current and future needs for creativity, curiosity, and thinking.

Let's take a look at each component of mathematical literacy. Making connections from different mathematical topics needed to solve the task and combining materials - making connections from different mathematical topics needed to solve the problem. This implies the ability to quickly and widely generalize mathematical objects, relationships, actions; the art of coherent, correct, separated logical thinking; the ability to quickly and freely reconstruct the direction of the thinking process, to switch from a direct thought to an inverse thought; the ability to formalize the perception of mathematical

material, understand the formal structure of the problem; the ability to find similar objects from several unrelated areas; analysis of used methods; the ability to think and draw conclusions based on information presented in various forms (tables, diagrams, graphs). Test items are designed to be grouped around general educational mathematical activities that are present at all levels of education:

• mathematical thinking and thinking, including the formulation of questions specific to mathematics; to know the nature of the answers that mathematics provides to such questions;

• Mathematical argumentation, which includes knowing what mathematical proofs are and how they differ from other types of mathematical thinking;

• communicative mathematical abilities, which include expressing one's thoughts related to mathematical content in written or oral form; understand written or spoken mathematical statements made by others.

• Modeling, which includes defining the proposed situation for modeling; translation of a real situation in a mathematical structure; interpret the mathematical model taking into account the real situation; working with a mathematical model; assessment of the correctness of the model; reflect, analyze, criticize the model and the obtained results; a note describing the model and the results obtained; systematic control of the modeling process.

• State and solve problems, including formulating, formulating, and defining a variety of mathematical problems, and solving a variety of mathematical problems using a variety of methods.

• Presentation of existing information in various forms, including decoding or, on the contrary, encoding, translation, interpretation of information, differentiation and determination of relationships between different forms of mathematical objects or situations; choosing or switching from one form of presentation of information to another, appropriate to the situation of the problem.

• the ability to use technical tools, including the ability to know and use various tools and devices that can contribute to the activity of mathematical activity; know the limitations of such tools and equipment.

CONCLUSIONS AND PROPOSALS (CONCLUSION/RECOMMENDATIONS)

A method of using traditional and innovative methods to combine mathematics. Another method of learning is the use of historical information in

mathematics lessons. The practice of working with the history of mathematics shows that it is with the help of the history of science, which is methodologically correctly included in the content of the lesson, that the imagination of mathematics can be formed in the student as a part of the universal culture. The method of creating problem situations in the classroom affects the modeling of mental processes. The method of organizing students' project activities is considered as a didactic tool for increasing educational and cognitive activity. Active participation in the creation of projects gives students the opportunity to master new methods of human activity and allows them to form some important personal qualities. The artistic and aesthetic improvement of didactic material during the educational process helps to ensure the emergence of positive feelings towards the educational activity, its content, forms and methods of implementation. Use of entertainment elements in mathematics lessons. method helps to develop the flexibility of the mind, to develop the skills of non-patterned thinking, and to increase interest in mathematics. Effective organization of the student's free time at home and at school is very important for the child today and tomorrow, for the future. If we alert them to useful resources through the phone and the Internet, it will be appropriate if we ensure that they get useful knowledge. Cross math - if it is possible to strengthen the mathematical knowledge of students of grades 1-4 through this program, we will help them learn foreign languages perfectly through another important program - Ibrat academy.

REFERENCES:

1. Umarova Gulhayo Murodiljonovna. Kichik maktab yoshidagi o'quvchilarni o'qishga bo'lgan qiziqishini oshiruvchi texnologiyalar // American Journal of Interdisciplinary Research and Development. Volume 09, Oct., 2022. pp. 210- 224.

2. Gulhayo Umarova Murodiljanovna, Zulayho Jabborova Mansur qizi. Kichik maktab yoshidagi o'quvchilarda o'qishga bo'lgan qiziqishini oshirish // —Ustozlar uchun‖ fidoyi va jonkuyar pedagoglar jurnali. 34-son, 1-to'plam, dekabr, 2022. 8-12 b.

3. Gulhayo Umarova Murodiljanovna, D.O.Ximmataliyev. O'smirlarda vatanparvarlik tuyg'ularini shakllantirishning usullari va vositalari // —Ustozlar uchun‖ fidoyi va jonkuyar pedagoglar jurnali. 34-son, 1-to'plam, dekabr, 2022. 13-23 b.

4. Umarova Gulhayo Murodiljanovna. Kichik maktab yoshidagi o'quvchilarda o'qishga bo'lgan qiziqishni klasterli yondashuv asosida rivojlantirish // —Pedagogs‖ international research journal. Volume-21, Issue-2, November, 2022. Pp.7-10.

5. Gulhayo Umarova Murodiljanovna, Qayumho'jayeva Fazilat Dilshod qiz.Kichik maktab yoshidagio'qishga bo'lgan munosabati//-Journal of integratededucation and research.Volume2, ISSUE 1January 2023.pp 150-154.

6. Gulhayo Umarova Murodiljanovna, Rasulova Arofat Zafarjon qizi.Kichik maktab yoshidagi o'quvchilarni aniq fanlarga qiziqishini oshirish metodikasi//-Conferencea virtual international.ARTICLES 2023.march pp 163-172.

7. Gulhayo Umarova Murodiljanovna, Xamraqulova Orasta Alisherv qizi.Inklyuziv ta'lim va uning bugungi kundagi rivojlanishi//Conferencea;2022;9thl CARHSE-england decabr108-111.

8. Murodiljonovna G. U. et al. INKLYUZIV TA'LIM VA UNING BUGUNGI KUNDAGI RIVOJLANISHI //Conferencea. – 2022. – С. 108-111.

11. Umarova G., Ximmataliyev D. FORMATION OF ATTITUDES TOWARDS LEARNING IN YOUNGER SCHOOL-AGE STUDENTS //Science and innovation. – 2023. – Т. 2. – №. B1. – С. 184-186.

9. Umarova G. PREPARING FUTURE PRIMARY CLASS TEACHERS FOR PROFESSIONAL ACTIVITY BASED ON THE DEVELOPMENT OF THEIR DIGITAL COMPETENCIES //Science and innovation. – 2023. – Т. 2. – №. B7. – С. 71-77.

10. Abdullayeva B., Umarova G. ORGANIZATIONAL AND PEDAGOGICAL CONDITIONS OF DEVELOPING DIGITAL COMPETENCIES OF FUTURE PRIMARY CLASS TEACHERS //Science and innovation. – 2023. – Т. 2. – №. B7. – С. 67.