World Bulletin of Social Sciences (WBSS)
Available Online at: https://www.scholarexpress.net
Vol. 24, July 2023
ISSN: 2749-361X

USING A VISUAL-CONSTRUCTIVE MODEL IN INTRODUCING SEMIOTIC EDUCATION TO PRIMARY CLASS STUDENTS

Abdusamatov Alisher Sobirovich
Termiz University of Economics and Service
Associate Professor of the Department of "Social and Humanities",
Doctor of Philosophy (PhD) in Pedagogical Sciences, Termiz (Uzbekistan)
E-mail: aabdusamatov912gmail.com
Phone: 91-577-62-99

Article history:

Received: 6th May 2023
Accepted: 6th June 2023
Published: 6th July 2023

Abstract:

In this article, the importance of semiotic aspects in teaching mathematics to young students, its applications, the necessary pedagogical conditions, the scientists and their views are described in detail, the branches, directions of semiotics and how we can use it in our daily life. passed

Keywords: Semiotics, primary education, mathematics, semasiology, pragmatics, syntactics

There are a number of important rules that apply to this model. According to them, an initial object I, which is called a number, is obtained. Other objects are created by attaching an initial object (ie, a number) to that object. Counting sticks are used as a demonstration tool in the practice of teaching young schoolchildren. One stick is taken as the initial object and another stick is added on top of this stick to form a new object. The resulting new object is also called a number, but it is quantitatively (ie, numerically) different from the original object.

Based on this method, the relationship between numbers and ratios, the order of changes of numbers (or objects) is studied. The formation of two numbers continues until one of them "breaks". The number where the process does not stop is quantitatively large. Visualization and objectivity of such construction (generation) of numbers depends on the action considered important for the formation of the concept of number in the child - the action of writing the elements in a mutually ordered manner [1. 28-p].

The model we are considering is implemented at the earliest stages of mathematics education in school: children generate numbers using a counting stick or other tool capable of performing calculations, thereby taking the most important step towards developing mathematical experience. Also, the child learns to count by writing the numbers in a mutually ordered form using his fingers and understanding the exact sequence of words representing the number.

In this model, an important factor in the child's mathematical development is that he discovers the use of fingers for counting in an unconscious, spontaneous way. Such behavior of the child confirms Burbaki's theses that mathematics shapes and enriches the child's imagination in an illogical and natural way. For the child to develop mathematically, it is important that he consciously performs his actions [2. 57-p].

However, this now becomes the teacher's pedagogical task: the teacher must rely on the child's experience and imagination in order to successfully solve this task. For example, a teacher can create conditions for younger students to draw lines on paper instead of counting sticks and to consciously understand the order of their multiplication.

Based on the experience of students who have consciously observed the order of increasing numbers, the teacher will also teach the act of addition by combining with this process: in this case, by placing a new counting stick (or a new line on paper) next to the counting sticks (or a line on paper), the child will learn that a new number will be formed as a result of the teacher's passive help. it is important to get [3. 19-p].

Doing addition in this way creates a foundation for children to discover other ways of adding by themselves (for example, they imagine themselves and their peers as one line). Thus, the teacher's performance of his pedagogical tasks based on the child's imagination and experience is focused on the child's conscious actions and creating an environment for him to perform purposeful actions as a result. The conscious and purposeful actions of a young student form the basis of the teacher's pedagogical activity aimed at the planned development of the child. In this situation, the teacher's activity consists of expanding the mathematical experience that children have begun to acquire, brightening the child's mathematical imagination, enriching the existing imagination with cognitive components such as verbal-speech and visual-spatial.

This demonstrative implementation of the operation of addition takes place within the framework

World Bulletin of Social Sciences (WBSS)
Available Online at: https://www.scholarexpress.net
Vol. 24, July 2023
ISSN: 2749-361X

of the usual laws of arithmetic. The child himself is not able to "discover" the properties of arithmetic operations, because the purposeful and motivational observation is not yet sufficiently developed in him [4. 34-p].

In the process of training a future teacher, the methods of learning the properties of arithmetic operations will consist of a didactic task solved using symbolic tools, among the usual logical tools. In particular, the presentation of these properties in the process of mathematical development of young students in a visual graphic form creates conditions for the introduction of the principle of visualization of mathematical information.

In the course of improving their mathematical readiness, students should master visualization methods that allow the teacher to present the image through the screen directly during the educational process. At the same time, the graphic tools used should correspond to the theoretical model on which the studied construct is built. For example, in the case of children performing arithmetic operations with counting sticks, commutative properties of arithmetic operations are presented visually by removing one "stick" from each of the sum of ordered numbers [5. 31-b].

The method of content reasoning, conducted in the form of imaginary experiments on the objects presented in a visual way, relies on the principles of strict presentation of the object and feasibility of action on this object. The objects studied in this method are absolutely clear, therefore, the actions performed on them can be performed visually. In this case, it is possible to create a conceptual image of these objects and reflect the activities of the subject along with the material world in their construction. Students' mastery of this theoretical model of the arithmetic of natural numbers will help them, as future teachers, to clarify the genesis of the concept of "number", to have a complete idea of the methods and means of mathematical development of young students, and to give a practically demonstrative and theoretically justified image of the concepts being studied to young students (or creates an opportunity to teach the construction of a symbol) [5. p. 62].

For children who are just starting to learn arithmetic, this model can be introduced in a completely demonstrative way: only here, instead of "counting sticks", a tool that can be used at all times and in any situation - fingers - is involved. Such an approach avoids the "prohibition" of direct recalculation of the results of actions in traditional teaching (see the textbooks and programs published by M.I. Moro and co-authors: there is an emphasis on memorization of the addition table by the student). But even in this approach, one very important aspect of teaching is revealed, that is, it is not considered a humanitarian science for the student: it becomes a science consisting of pictures and signs of everything that the child can see, feel, touch with his hands [6. 19-p].

Most importantly, as a result of such changes, the student acquires new knowledge about everything imaginable, regardless of the tools he directly used. Moreover, it is possible to "see" the results of changes made only in imagination: in this case, the teacher should be able to introduce the relevant constructions as an imaginary model of actions performed on various objects. Also, by introducing this approach, it is possible to build an adequate visual model of numbers and to perform arithmetic operations on numbers that have their own names. strictly considered in its logical abstraction.

Knowing the theoretical foundations of this model of numbers does not lose its importance in the above cases. In other words, it is necessary for the teacher to apply the learned theory to the activity aimed at clarifying the essence of natural number from the point of view of this theory. That is, the teacher:

1) within the framework of this theory, how to organize the child's activities related to the subject in order to achieve the abstraction of the child's actions, rather than the properties of the subject of the child's actions;

2) how to achieve a sufficiently demonstrative and conditional content of the meaning conveyed through each element of the picture used in the performance of actions;

3) it is necessary for the child to know how to organize the activity of performing actions on the formed abstractions and the like.

The importance of visually presenting concepts whose essence is not known at first glance is special. Therefore, the teacher needs to understand the purpose, essence, and meaning of each picture in the formation of conceptual images. The picture, first of all, makes it possible to perceive the studied object in a holistic way: this result cannot be achieved either by moving actions or by verbal statements. A creative component in the form of visual thinking is involved in the cognitive activity of the student who creates the picture himself (that is, the student brings out his creative potential). The transfer of the symbol to the image ensures that the performed actions will take on a visual tone with the help of abstractions. The child's transition from drawing to working with signs, that is, to performing actions whose value is determined with the help of signs, and therefore to abstract-logical thinking, gives the expected result only in cases where he relies only on visual images.

World Bulletin of Social Sciences (WBSS)
Available Online at: https://www.scholarexpress.net
Vol. 24, July 2023
ISSN: 2749-361X

Of course, the future teacher's formation of knowledge about natural numbers, which is necessary for the mathematical development of young students, is not limited to the theoretical model presented above.

The model built on the basis of the theoretical-set approach to clarifying the nature of operations on numbers and numbers is considered the main model in the practice of primary education. This importance is manifested in solving problems related to finding how many elements a particular set consists of. The answer to the question of how many elements a particular set consists of can be found by adding them using a predetermined sequence of addends. Usually, this sequence is given in advance and you just have to memorize it.

LIST OF REFERENCES:

1. Александрова Э.И. Психолого-педагогические основы построения современного курса математики // Начальная школа.-2013.-№ 1.-С. 56.
2. Avliyakulov N.Kh. Modern teaching technologies. Study guide. -T.: 2001.-68 p.
3. Abdusamatov A.S. Teaching technology science in elementary grades using universal learning activities. Pedagogical sciences and teaching methods international conference. 10.10.2021.-P.165-170.
4. Abdusamatov A.S. The use of modeling methods in elementary mother tongue lessons. Models and methods for increasing the efficiency of innovative research International scientific-online conference 2021-Germanya.-P.147-153.
5. Абдусаматов А.С**.** Aspects of primary mathematical education different from other disciplines of education.**//**Актуалъние вопросы современной науки 2020 г.**-** P.111-115.
6. Беспалько В.П. Педагогика и прогрессивные технологии обучения. -М.: ипро,1995.