

Methodology Of Developing Logical Thinking In The Process Of Teaching Mathematics In Grades 5-9 Students Ways To Apply In Practice The Didactic Complex Of Conditions For The Development Of Logical Thinking Of Students In Mathematics Lessons

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An important aspect of developing students' logical thinking is related to their socialization. While socialization refers to the process of formation of a person under the influence of culture, communication, communication with each other, the concept of socialization is the process of assimilation of exemplary behavior, psychological mechanism, social norms and values necessary for the successful development of society [144; 173-174-p.]. Socio-philosophical, psychological and pedagogical research has identified the following features of the socialization of the individual: social factors (mega factors, macro factors, meso factors, micro factors, realities and their influence on the socialization of the individual in certain periods and the transition from one period to another) social, in particular, the relationship between parents and the child, their emotional unity is important in the development of the child as a person; the person is governed by certain schemes and cognitive structures; therefore, his adaptation to these schemes and cognitive structures is socialization. means that a person acquires elements of scientific knowledge and personality culture through social influences, on the basis of which he develops mentally and acquires moral qualities - this is a priority of socialization of the individual; socialization of the individual in various social systems, the development of society does not pass the same in certain periods of; each period manifests itself in a unique way in the socialization of the individual; socialization is not only a characteristic of childhood, but covers all stages of a person's life [127; 8-9-p.].

Socialization is the development and self-transformation of a person in the process of acquiring and re-applying culture, which takes place in harmony with the natural, goal-oriented living conditions of all ages. In this process, the main task of the educator is to achieve the development of a person who is independent-minded, understands his place in society and the direction of personal aspirations, able to preserve and strengthen national and universal values. In this case, pedagogical activity plays an important constructive social function: in this process, not only the individual is formed as a whole, but also the future of the country is determined, its cultural and production potential is ensured. The description of

pedagogical activity in relation to foresight reveals the versatility of its goals, not only to meet the needs of the individual and society for today, but also for the future, not only the adaptation of young professionals to social life and professional activities, but also their innovation.

It is well known that socialization is the process by which an individual enters society based on his or her acceptance of values in society and the achievement of the necessary level of social, civic and personal maturity [64; 43-p.]. The socialization of the individual is the process by which a person perceives himself as a person in society. This occurs in the process of upbringing, education, self-education, when a person is able to independently define their goals and determine ways to achieve them, realize their dignity, and become confident in their place in society. In other words, the socialization of the individual is the process and result of the improvement of human psychological functions, the assimilation of socio-moral values, norms and rules of behavior, the enrichment of worldviews under the influence of education.

As noted by A.M. Stolyarenko, the process of socialization is more complex than its qualitative characteristics, composition, laws, factors, conditions, management and manifestations in the socialized person (his features, qualities, peculiarities) [132]. That is why it reflects the various forms of socialization that are considered by different disciplines - cultural, moral, legal, labor, psychological. When it comes to pedagogy, the process of socialization in this area is given special attention as a type of pedagogical socialization, taking into account the specificity of the subject, field and needs of pedagogy. It is the result of the process and emergence of socially defined and important pedagogical new-born experiences from the moment of birth - upbringing, education, awareness and development, as well as their constant change (improvement) throughout their future lives.

In this case, there is no passive approach to the individual, but he is seen as a subject of social relations and the pedagogical system, active and independent in gaining experience and self-formation, as well as a sense of responsibility for their own way of life. The task of pedagogy is to help a person to become a thinking person, a citizen of his country and the world, to understand his place and behavior in society, the direction of his aspirations, to preserve and strengthen universal values together with teachers and the pedagogical system in society "[131 ; 25-p.].

According to AV Mudrik, the process of socialization consists of a combination of human social adaptation and social autonomy [99]. Successful socialization requires a balance between active adaptation of the person in the social environment and stability in the author's behavior, which is reflected in the attitude towards the norms accepted in the society.

The socialization of students' logical thinking is a complex, continuous, and multifaceted process that requires the environment and logical thinking to focus on student-centered activities, communication, self-awareness, self-improvement, and the expansion of the individual's social connections with the outside world. psychological, social, cultural, pedagogical levels.

The main difference of the process of socialization of students with developed logical thinking is reflected in the education of a person capable of self-development, self-improvement and mastering non-standard methods of solving problems that arise in different life situations. That is why in the pedagogical process it is important to develop the logical thinking of students in the interaction, the formation of the qualities of independent work, free thinking, creative imagination, ingenuity, creativity. Therefore, the socialization of the development of students' logical thinking requires reliance on certain mechanisms.

Based on the general mechanisms of socialization, the following mechanisms of socialization of students with developed logical thinking can be distinguished:

traditional - the development of logical thinking of students through the family and the immediate environment, the involvement of social activism, the creation of favorable conditions for activity and communication;

institutional - the creation of the necessary conditions and opportunities for the development of students' logical thinking by social institutions and educational institutions;

interpersonal - involvement of students in the development of logical thinking in the system of social relations, the development of communication skills in them;

reflexive - the development of individual consciousness through pedagogical support of self-awareness, self-assessment, self-design.

An important condition for the socialization of the development of students' logical thinking is the determination of their social competence. Social competence is expressed in establishing communication with other people, which requires a person to be focused on social situations and have the ability to manage. Key functions of social competence can include adaptation, social orientation, personality integration, and overall social experience.

In the socialization of the development of students' logical thinking, the need to express themselves and their individuality prevails over the principle of "being like everyone else." That is why it is necessary to combine the influence of the individual and the environment in this process.

Experimental work has led to a number of conclusions about the urgency of the problem of developing social competence in the development of students' logical thinking. One such trend was observed in the development of students' logical thinking, in which social skills are characterized by the peculiarities of the same underdeveloped learning environment. Respondents from different secondary schools, whose number of students developed logical thinking, did not participate in the experimental work. These secondary schools are conventionally divided into three groups: general secondary schools, in-depth classes of general secondary schools, and specialized general secondary schools.

The results of the focus group research conducted among the leaders, teachers, psychologists, parents of general secondary schools allowed to highlight the following problems that arise in the socialization of the development of logical thinking of students:

actively participate in science olympiads in the development of logical thinking of students studying in standard classes of general secondary schools, are engaged in in-depth study of a subject, often observe distance from class social life, face difficulties in establishing trusting relationships with classmates. The reason for this situation is the lack of special pedagogical attention to students with logical thinking in this type of school, the negative state of the student's objective (individual-psychological feature of the student) and subjective (student's interaction with peers). failure to put) is related to his indifference to the fact that he does not participate in various activities in the classroom. Experimental results showed that the level of social acceptance by the class team was significantly higher than that of those who developed intellectual logical thinking to develop students' logical thinking in sports. Achievements and opportunities in sports allow the student to accept the class team freely, without excessive difficulty. Therefore, the behavior of developing students' logical thinking in sports is almost indistinguishable from that of ordinary children, they are able to actively engage in interpersonal relationships, characterized by having the same social skills as classmates.

For specialized classes, cohesiveness, group identity, as well as a high level of demand on the individual student, are specific to hidden conflicts within a group in the form of mutual competition. It should also be noted that the development of logical thinking in students in the same class does not always reflect the collective character. The need to argue for leadership, to demonstrate one's superiority, takes a superficial view of relationships in the classroom community and hinders the development of social skills in students. That is, it

leads to the expansion of personal social experience in students and limits the provision of integration in society.

The development of students' logical thinking in specialized general secondary schools was marked by the existence of hidden conflicts between parents and the teaching staff.

Parents, considering their children to be extremely gifted, insist on creating the most favorable conditions for their education, without imposing various social regimes on the school community. For example, it is clear from the responses of parents that they believe that there is no need to conduct educational activities (educational hours, extracurricular and extracurricular activities) for students studying in these schools. In fact, the main purpose of these educational activities is to form students as a team, to act on the basis of social purpose, to establish mutually beneficial communication, in short, to ensure successful socialization. In this way, parents limit the opportunities necessary for their children's social orientation, and the result is that social institutions do not develop sustainably. This leads to the inability of the child to adequately assess himself, the formation of misconceptions about his social position.

Based on the results of the study, it was concluded that the following stages should be taken into account in the socialization of the development of students' logical thinking: the initial stage of collectivization or adaptation. At the same time, the social experience is mastered, adapted and accepted by the student; stage of individualization. This creates a desire for students to work independently and express their independent opinions in the implementation of independent ideas, positive and critical thinking in relation to the norms of social behavior; integration phase. The student tries to find his place in society, to enter the life of the society, to be recognized by others in a positive way, to express himself in a positive way in the activity, that is, the desire to introduce himself as a person comes first; stage of social activity.

Successful socialization of the development of students' logical thinking requires the following work in educational institutions: the creation of a database of students. The database should contain all the information about the reader; to carry out a precise analysis of the social environment in the educational institution. It is the level of the environment that has a positive or negative impact on the education of the student, the formation of his intellectual and creative potential. The analysis of the environment should be carried out in the following way: to determine the original state of the existing social environment, the actions that develop intellectual potential; to determine the attitude of teachers to the social environment; to determine the attitude of students to the social environment, the activities carried out by the leadership; study of social opinion among students; identify emerging and pending issues; development of specific plans and programs that enhance the scientific and creative activity of students.

The plan and program developed on the basis of environmental analysis should, first of all, identify the current work to be done. In this case, the following should be clearly stated: creative and educational work carried out in the educational institution; intellectual competitions and creative work in families; work with public organizations, various foundations and sponsors; activities at the level of the educational institution, class, group, direction, department; work carried out in the student self-government body; work on the formation of ideological immunity in students; formation of an environment to combat negative currents, harmful ideas; creating monitoring of the process of developing students' intellectual and creative potential. Through the formation of a single monitoring of all work carried out, it is possible to directly monitor the process. It is also possible to analyze the progress of the process.

Based on the results of the analysis, it was concluded that it is necessary to develop models aimed at improving self-government activities in the student body and the socio-cultural

activities of the class teacher to ensure the successful socialization of students in the development of logical thinking.

In terms of an activity-oriented approach, social experience reflects a set of spiritual and moral values and attitudes that emerge as a result of the learner's interactions with other people and the environment. Therefore, it is expedient to consider the "experience of self-management" as a component of social experience, aimed at forming a culture of self-organization and self-correction in the individual. Involvement of the individual in subject-subject relations as the main social spheres of the formation of the experience of self-government; formation of initiative in the subject; such as the adoption of universal patterns of self-organization in the process of vital activity.

From the point of view of the axiological approach, the formation of social experience in the individual takes place in two interrelated directions. On the one hand, the meaning of human life, the formation of value-oriented orientation in the individual as a moral and ethical norms and rules in interpersonal relationships, on the other hand, behaviors in the process of interaction, social and vital behavior reflected in self-government with a high personal position -reflects the connection with the mastery of moral norms.

Orientation of students to self-government as a pedagogical phenomenon requires a combination of intellectual, emotional and activity-oriented areas related to the development of personal potential and serves to increase social activity through the development of students' creative abilities at a high level.

The results of the study showed that the development of students' logical thinking, the acquisition of social experience should be carried out in the following stages: social adaptation: the ability to determine their role in social situations, adaptability and mobilization; project: self-awareness in the process of social activity, the ability to choose individual behavioral strategies; internalization: the adoption of basic norms of social activity and their manifestation in activity.

The study developed an organizational-integrative model of socialization of students' development of logical thinking on the basis of self-management.

The peculiarities of the socio-cultural activity of the class teacher in the development of logical thinking of students in secondary schools are reflected in the following: the organization of effective joint activities of the class teacher and students to develop logical thinking on the basis of interaction, cultural, creative and empathic communication. In this process, the individual - conversation, grouping, counseling, exchange of views, joint assignments, individual assistance in a particular case, joint search for solutions to problems; group - it is advisable to use forms such as role-playing and business games, press conferences, discussion clubs; focusing on developing students' logical thinking in terms of developing multiple positive roles in terms of developing a positive emotional relationship. Activities can include forums, creative groups, self-governing bodies, micro-circles; enriching the experience of goal-oriented creative activity in the process of joint activities, taking into account the interests of developing students' logical thinking in relation to areas of social importance. Activities can include volunteering, contests, concerts, advocacy groups, tourism and sports competitions; establishing social partnerships to develop initiative and activism in the development of students' logical thinking; to present to the public the achievements of students with developed logical thinking, to create conditions for success; to develop general cultural skills in a student with developed logical thinking, to expand knowledge about the coevolution of man, nature and society, taking into account the profession-oriented activities related to the practical application of professionally oriented forms of socio-cultural activities (laboratory, master classes, quizzes of professional terms).

Based on the results of the analysis, it was concluded that the design of the activities of the class teacher as a mechanism for the development of students with developed logical thinking

is important. Design is the creative activity of a class teacher aimed at creating a virtual model of the development of students with logical thinking in the process of socio-cultural activities in secondary schools. The design of socio-cultural activities with students with developed logical thinking, in turn, is directly related to the readiness of the class teacher for this activity. In retraining and advanced training courses, it is advisable to include motivational-need, cognitive, activity-based, emotional-volitional and reflexive-assessment preparation components of design activities based on teaching special modules related to the socio-cultural activities of the class teacher.

Based on the theoretical analysis, it was determined that the organization of socio-cultural activities of the class teacher should be based on the following methodological bases: system-activity approach (theoretical-methodological approach that creates a holistic view of the readiness of the class teacher to implement specific methods of organizing socio-cultural activities) strategy); socio-cultural approach (theoretical and methodological orientation based on the analysis of socio-cultural reality through interaction); partnership-role approach (a system of theoretical, practical and experimental work aimed at ensuring the expected results in the process of designing socio-cultural activities as equal partners in the extracurricular activities of the class teacher and the student with developed logical thinking). Based on the results of the research, a technological model of designing socio-cultural activities of students with developed logical thinking of the class teacher was developed.

The component of the model on the definition of goals and objectives requires the definition of strategies for the implementation of this process, the definition of methodological approaches and principles.

Designing the content of the socio-cultural activities of the class teacher is to create a model of activities with students with logical thinking, to prepare class teachers to organize socio-cultural activities with students with logical thinking in the course of elective courses in the implementation, retraining and advanced training includes training in special modules.

The organizational and technological component requires the correct selection and harmonization of design stages, methods, pedagogical conditions and forms. This stage allows the class teacher to develop and implement programs of socio-cultural activities organized with students with developed logical thinking, as well as to assess their effectiveness.

The diagnostic component provides a theoretical basis for the results obtained and an assessment of their statistical significance.

The pedagogical conditions that ensure the success of the process of designing socio-cultural activities organized with students with developed logical thinking of the class teacher reflect the external conditions and the optimal environment. The study identified the following pedagogical conditions of social partnership:

macro level: cooperation of educational and cultural institutions that serve the education and development of students with developed logical thinking;

micro level: joint activities of secondary school teachers and parents of students with developed logical thinking;

the level of formation of the student's personality, which develops logical thinking: ensuring self-development and full expression of talent.

The most important aspect of the technological model of designing socio-cultural activities of students with developed logical thinking is to develop the readiness of the class teacher for socio-cultural activities, on the one hand, to ensure the satisfaction of students with developed logical thinking on socio-cultural activities.

Mirziyoev Sh.M. Speech at the joint session of the Oliy Majlis of the Republic of Uzbekistan on the occasion of the inauguration of the President of the Republic of Uzbekistan on the

theme "Building a free and prosperous, democratic state of Uzbekistan together with our brave and noble people." - T. : "Uzbekistan", 2016. - 56 p.

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