

Application of Correction-Developing Educational Technologies in Teaching Students of Primary Education with Specialized Education

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Abstract: In this article, the content of the application of correctional and developmental educational technologies in the formation and development of the basics of literacy, knowledge, skills and qualifications in mathematics lessons of Primary School students with special educational needs is expressed. Primary education is also given a process analysis aimed at forming the foundations of literacy, knowledge, skills and skills necessary for the continuation of general secondary education in learners, ensuring equal opportunities for education in educational organizations for all learners, taking into account the diversity of individual educational needs and individual opportunities for Inclusive Education. The content of the application of correctional and developmental educational technologies, which take into account the features of a particular defect, is covered for the successful course of this process.

Keywords. Student with special educational needs, mathematics, knowledge, skills, qualifications, primary education, correction, corrective-developmental educational technologies.

1. Introduction

In the process of creating innovative technologies that positively affect the development of students with special educational needs in educational and research organizations around the world, ensuring their socialization, teaching primary education students with hearing problems through corrective-developmental educational technologies, research is being carried out to improve the activities of surdopedagog, science teachers. At the same time, special attention is paid to the modernization of the teaching system of students with hearing problems, the improvement of the activities of educators, the formation and development of their knowledge on the basis of personality-oriented education, individual and differential approaches to students.

In our republic, the legal and regulatory framework for ensuring the health and mental, psychological, physical and social development of children with special needs in education, as well as for improving the types and forms of education for children with hearing problems, carried out on the basis of a single and continuous education system, on the basis of the requirements of the period and international For students with special educational needs in our republic, through the use of special tools and techniques in the school, creating an unobstructed adapted educational environment with the involvement of special educators, providing quality general secondary education that serves their effective adaptation to society and full-fledged harmonization; in specialized public educational institutions, opportunities are expanding to further improve the mechanisms of modernizing educational services, organizing an informational educational environment in order to improve the quality of education, educating students with physical, mental, sensory (sensory) or mental impairments.

Researchers from Russia, the United States, Western Europe and Asian countries have accumulated significant theoretical and practical experience in the field of using computer technology in the education of children with special educational needs. In Particular, E.JI.Goncharova, Z.M.Cardon, O.I.Kukushkina, O.N.Lizunov,

J.I.P.Lizunova, T.V.Pelinskaya, Z.A.Repina, Yu.I.Sakulina, N.D.Schmatko, J.Bang, R.Gelman, R.Johanson, E.MEK, L.R.In the work of the muminovas, approaches to the use of pedagogical and information technologies in solving correctional and developmental issues in the directions of special pedagogy were developed, scientifically substantiated. In our republic, too, children with special educational needs are being transferred to a qualitatively completely new stage in the development of educational systems. To date, inclusion is becoming the main trend of this stage, and the computer is becoming the main tool. The research of scientists comes, first of all, from the issues of social and educational integration of children. Therefore, the creation and improvement of new, interactive, information and digital technologies is becoming a rapidly developing direction of special pedagogy.

It is advisable to continue general secondary education of students with hearing problems, to introduce into practice effective trends, educational technologies introduced and applied on a global scale, a corrective-developmental process with the possibility of structuring the necessary literacy, knowledge, skills and qualifications in primary education in order to find a place in social life in the future.

The emphasis on determining the degree of formation of the foundations of mathematical knowledge, skills and qualifications was carried out in two stages. The first stage was focused on determining the degree of formation of mathematical knowledge in elementary education students with hearing problems and analyzing it numerically. The second stage of the study was aimed at qualitatively analyzing the degree of formation of mathematical knowledge identified in the first stage in primary education students with hearing problems, on the basis of which the study of features in the acquisition of mathematical knowledge in students with hearing problems in primary education. Tasks compiled to determine the levels of mathematical knowledge formed in students – arithmetic tasks in the subject-verbal description; arithmetic problems (with and without reliance on exhibitionism); arithmetic were allocated to the types of examples.

An emphatic study conducted in experimental work to determine the levels of the formation of mathematical knowledge in children with hearing problems – analysis at the level of visual-figurative thinking and thought operates on synthesis, comparison, abstraction and generalization; the ability to distinguish the relationship between visual signs and work on these relationships in thought; active speech, which becomes a means of thinking activity in children; ; understanding the systematic relationship between these concepts, their relativity; a reversible thinking qualification in relation to any mathematical situation; a qualification for performing the actions of addition, subtraction, multiplication, division "in the heart" (table and non – table cases of addition, subtraction, multiplication and division actions within 10, 100, 1000 and multi-digit numbers); the qualification of dividing any one-digit, two-digit, three-digit and multi-digit number into; qualification of self-control of his own mental behavior in solving arithmetic problems and examples; the task of the condition of the issue, the question, the way to solve it, comparing the result obtained, comparing similar examples, checking the results of the account with the opposite effect was given the tasks of qualification. For the experimental work of the emphasis research, methodologies were created to study the level of formation of mathematical knowledge in students. All mathematics assignments were prepared on the topics available in the mathematics science program of primary education of specialized schools for children with hearing problems, as well as textbooks developed on this basis.

On the results of the research carried out, a comparative analysis was carried out with the level of development of visual thinking and speech, the result achieved by students in solving mathematical tasks, arithmetic problems and examples.

In the research work, in the process of studying the corrective-developmental environment in educational institutions for children with special educational needs, the compatibility of students with hearing problems of these educational institutions with special educational needs and opportunities was studied. For the mathematical education of children with hearing problems, special attention was paid to the possibility of adaptive and variative use of rooms where class and corrective classes are held.

Surpedagog's boarding school for children with special educational needs to improve the quality of mathematical education in primary education with the aim of identifying problems in teaching mathematics to students with hearing problems, "what difficulties do elementary students with hearing problems have in

mastering mathematics?" on the basis of a special survey, a survey was conducted between surdopedagogs, educators of primary education of specialized educational institutions.

The requirements for the introduction of projected corrective-developmental technologies into the process of teaching mathematics in primary education of children with problems of purposeful hearing were developed: the importance of improving corrective-developmental educational technologies in the context of National Education; the universality of corrective-developmental educational technologies for children with special educational needs in relation to the system of teaching; the project of the correctional-developmental educational process-the development of a technological map. The development, improvement of the professional competence of Surdopedagog ensures the effective implementation of the corrective-developmental process.

Teaching mathematics is a complex process that arises from the direct connections of the activities of the teacher and students. Mathematical knowledge, skills and competencies at the stage of primary education of students with hearing problems, the formation and development of a system of mathematical knowledge and skills necessary for students to apply in everyday activities, study subjects and continue to receive education; the formation of a person who can successfully operate in a rapidly developing society, who can think clearly and clearly, critically and logically; appreciation of national, spiritual and cultural heritage, rational use and preservation of natural and material resources, education of mathematical culture as a component of universal culture-is formed in accordance with the main goal of teaching mathematics. The special methodology of teaching mathematics has a number of distinctive features that differ from the methodology of teaching mathematics in general education schools, which is manifested in particular in a certain choice and composition of teaching methodologies, optimization of material volume, harmonization of selectable methods and tools, as well as in their implementation.

Based on the particular educational needs and capabilities of children with hearing problems, the training of mathematics in preparatory, effective mathematics and preparation for the study of algebra and geometry were divided into periods. In connection with the name of these periods, a system of mathematical training assignments was developed. Also, plan-texts of mathematics lessons were developed, put into practice, in which the stage of mathematics and everyday life was introduced. New educational training programs such as "mathematics-everyday life", "financial literacy" were developed and applied to the educational process.

A mathematical cluster focused on the formation of competencies of students with hearing problems and the effective organization of the activities of surdopedagogs, a mathematical dictionary, an integrative dictionary and Information Communication Technologies were introduced into practice, covering four forms of basic material-base schemes, a mathematical Portfolio, speech, such as Dactyl, gesture, verbal, written.

Taking into account the scale of the need for students to create multimedia tools designed to develop a system of Mathematical Thinking and actions, the elementary-grade mathematics textbooks of specialized boarding schools for children with hearing problems developed multimedia applications named after our children of mathematics Alphabet, cheerful mathematics, travel to the world of mathematics, intelligent mathematics, we were introduced into the educational process.

In the research work, the improvement of correctional and developmental educational technologies in primary education of children's boarding schools with special educational needs was explained on the basis of the following factors: the interdependence and social significance of the development of students' mathematical speech, mathematical thinking and mathematical knowledge, skills and competencies in an informational educational environment and on the basis of; this category is due to the fact that children's education relies on extremely complex and specific principles, in which an integrated approach is necessary; surdopedagogs are the magnitude of the need for tools that allow students to achieve motivation to acquire knowledge during classes and maintain them in a positive mood for a long time; there is a need for additional cognitive-visual.

Theoretical-methodological ideas on competency, bilingualistic, functional-communicative, systemic-semantic, polysensory, cognitive-visual approaches in turn, on the basis of these approaches, children's boarding schools with special educational needs for children with hearing problems, necessitated the development of a corrective-developmental educational technology model in primary education. In this model, the main base elements that make up

the system - targeted, organizational-meaningful, practical-technological and Criterion-evaluative, corrective components-are expressed.

The content of the foundations of mathematical knowledge, skills and competencies in elementary grades of students with hearing impairments is determined on the basis of the project of the national program for the study of mathematics of general secondary education. This program Project provides recommendations on the development of students' base - communicative, information work, self-development, socio-emotional competencies through mathematics. A system of national educational standards "Al - jabr" has also been developed, covering competencies in mathematics-standards of mathematical content and mathematical practice. The standards of mathematical content (knowledge and skills) represent the understanding of the essence of basic mathematical concepts and relationships and their use in the performance of typical educational tasks. The standards of mathematical content are expressed in the form of generalized requirements, covering the sections of numbers and operations, geometry and measurements and probability and statistics of Mathematics at the stage of elementary education.

Mathematical practice standards (competencies) represent acquired knowledge and skills to solve practical issues and be able to apply them in unfamiliar situations. The standards of mathematical practice consist of practical application standards of general content, which cover the following areas of mental activity of students:

reasoning: to provide logically valid and understandable arguments for substantiating, proving or reacting to other people's opinions on mathematics; modeling: to express educational and life problems in the language of mathematics, to build their mathematical model; solving a problem: solving a problem using mathematics; communicating: communicating in the language of mathematics on the basis of mathematical concepts, signs and representations; working with data: collecting, analyzing

Theoretical, methodological and practical materials on the formation of mathematical knowledge of Primary School students with hearing problems in the development of the content and methodology of educational experimental and test work; data obtained on the basis of the results of the emphatic experimental research and the analysis of the corrective and pedagogical activity of surdopedagog were taken into account.

2. Discussions and results

The research work was organized on the basis of the experimental program of the work system for the evolution of correctional and developmental technologies in primary education of children's boarding schools with special educational needs. In addition to the special educational needs and opportunities of students with hearing problems, the requirements that they should master at this age were also taken into account in this program. In this, primary education was relied on the mathematics program.

Educational research experiment was conducted on the basis of 101-specialized boarding school for deaf children in Tashkent, 106-specialized boarding school for weak hearing children, 61-state educational institution for deaf children in Samarkand region, state educational institution for weak hearing children in Jizzakh region. Participants in these institutions were divided into experimental groups and control groups, and children with hearing problems were involved in experimental test work.

Educational pilot work was carried out on the basis of assignments in three criteria. On the first criterion, students were given arithmetic assignments in the subject-verbal description; on the second criterion assignments, arithmetic issues (with and without reliance on exhibitionism) and on the third criterion assignments – arithmetic examples. On these criteria, the level of achievement of arithmetic tasks in the subject-word description of students, solving arithmetic problems and arithmetic examples was determined.

In elementary students with hearing problems, the description of the four levels of the formation of mathematical knowledge: High, Middle, Low, very low, the means of carrying out the task of didactic tasks of mathematical tasks were developed in the class cross section. Students participating in educational pilot work were given tasks written on separate cards-mental maps.

Based on the analysis of the result of performing arithmetic tasks in the subject-word description, it was concluded what mathematical concepts students acquired in relation to each concrete situation. Arithmetic problems in class cross section, it was first proposed to students to solve the problem by the usual arithmetic

method, that is, by writing down the arithmetic operations and response of the problem. They were then asked to outline the content of the matter by means of practical actions performed on the relevant subjects. As part of solving examples, students were given attention to their own aspects.

The results of the research experimental test work show that the overall level of development of speech is an important condition that helps in mastering mathematical concepts, but not the only one. Although the fact that students' speech has developed at a much higher level is an acceptable factor, it cannot be the only factor that determines the consequentiality in mastering basic mathematical concepts. The results of educational experimental test work on criteria are presented in Table 1.

Table 1. Educational experience-indicators of the formation of the foundations of mathematical knowledge, skills and qualifications of students of primary education in test work

Criteria	Groups	Enrollment	Formation levels				Formation levels (%)			
			High	Middle	Low	Too low	High	Middle	Low	Too low
Criterion 1	experience	203	21	109	64	9	10,3%	53,7%	31,5%	4,4%
	control	204	6	63	100	35	2,9%	30,9%	49,0%	17,2%
Criterion 2	experience	203	21	99	68	15	10,3%	48,8%	33,5%	7,4%
	control	204	6	55	103	40	2,9%	27,0%	50,5%	19,6%
Criterion 3	experience	203	25	93	75	10	12,3%	45,8%	36,9%	4,9%
	control	204	8	52	104	40	3,9%	25,5%	51,0%	19,6%

Educational research experiment conducted during the test work to determine the effectiveness of the analysis of the possibilities of corrective-developmental technologies for students with hearing problems in the formation of mathematical knowledge, the results of the experiment and control groups on the results of the test method

T-statistics were analyzed using the method.

We give a generalized diagram as the efficiency indicators of the criteria.

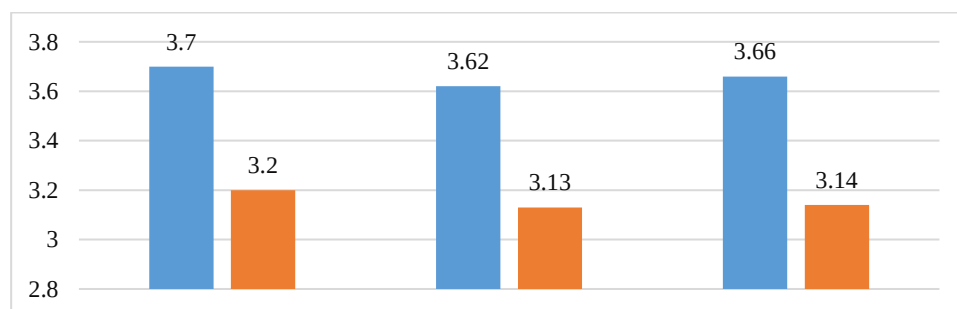


Figure 1. Diagram of averages by all criteria

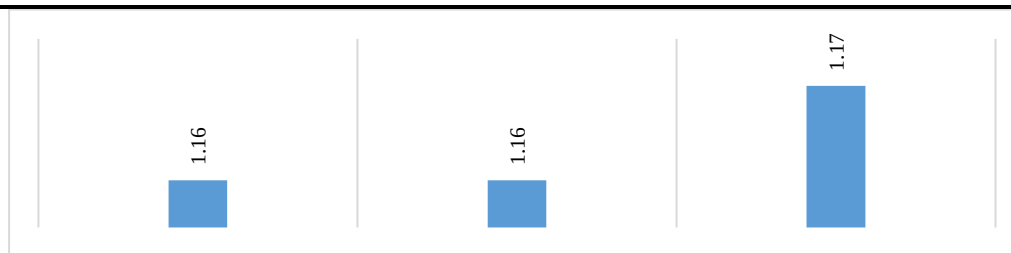


Figure 2. Performance indicators of the research work carried out

Statistical analysis of the results obtained confirmed the correctness of the working hypothesis. The mathematical imagination of students with hearing problems, the formation and development of knowledge, skills and competencies of Science in class cross-section, the formation of speech, auditory perception, pronunciation skills in students in parallel with this process, the importance and capabilities of corrective-developmental educational technologies in correcting the primary and secondary defects present in them have found evidence.

3. Conclusion

The result of the research work on the topic of the application of correctional and developmental educational technologies in primary education of children's boarding schools with special educational needs, aimed at issues of social and educational integration of students, served to substantiate the following conclusions:

on the basis of the analysis of the studied literature, as well as legal and regulatory documents, it was established that children's boarding schools with special educational needs are a complex, multifunctional system for the formation and development of the foundations of mathematical knowledge, skills and qualifications of students with hearing problems in primary education, that this system depends on certain socio-pedagogical conditions, In primary education students with hearing problems, the breadwinners of the formation and development of the foundations of mathematical knowledge, skills and qualifications were identified.

A mechanism has been developed for the implementation of a corrective-developmental educational technology model in the primary classes of specialized educational institutions for children with hearing impairment. Psycholo-pedagogical diagnosis of students in accordance with this mechanism; drawing up corrective-developmental variative work plans for each student and class on the basis of personality-oriented, individual, differential, cognitive-visual, competency approaches and determining the expected results; formation and development of educational-cognitive activity; determining the level of knowledge in the areas of activity of surdopedagogs, their theoretical-practical readiness for the organization of a corrective-developmental process and constant self-development, directions of reflection are systematized.

8 categories are distinguished according to the hearing status of children with hearing impairment. Their level of speech development is also different, their speech is not developed at all, although their speech is partially developed, many shortcomings are observed in pronunciation, lexicon, grammar structure, prosody, linkage speech, most importantly, their understanding of the semantic meaning of speech and access to linguistic communication arise at different levels. The effectiveness of the use of corrective-developmental educational technologies based on individualization and differentiation in the educational management process has been determined to create an environment to eliminate the problems of a contingent of children with hearing impairment at different levels in physical and psychic development.

Correctional-developmental educational technologies have been improved in inclusive education and in blalar boarding schools with special educational needs as a means not only to meet the needs of primary education students with hearing problems, but also to form and develop this need in accordance with the requirements of society.

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