



## DEVELOPMENT OF SCIENCE LEARNING OF CHILDREN WITH DISABILITIES (DEAF AND HARD OF HEARING) IN THE FIELD OF INFORMATION AND COMMUNICATION TECHNOLOGIES

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### Abstract

*This article discusses the development of education for children with disabilities (deaf and hard of hearing) using information and communication technologies in the process of education in the Republic of Uzbekistan.*

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In our country, the issues of education, upbringing, career orientation, integration of children with disabilities into the society are among the urgent directions of the state policy regarding youth. Because in Uzbekistan, one of the five principles of development - a strong social policy has been put on the target path, comprehensive support of the population in need of assistance is legally guaranteed.

Today, the fourth direction of the Strategy of Actions on the five priority directions of the development of the Republic of Uzbekistan in 2017-2021 is the development of the social sphere, the tasks set in it indicate that the priority of humanitarianism in our country, the kindness characteristic of our nation, is an important talent. In particular, tasks such as strengthening the social protection of the needy strata of the population, state support for the elderly and disabled persons, and improving social services for them require the fundamental improvement of the education system for disabled children, and the introduction of innovative technologies into this process [1].

One of the priorities in the development of the education system for children with hearing impairments in the Republic of Uzbekistan is the development, testing and implementation of special requirements in the State Educational Standards of the Republic of Uzbekistan for basic general education for this category of students.

On the instructions of the Ministry of Education and Science of the Republic of Uzbekistan, the authors of the article developed a draft of special requirements in the State Educational Institution of Uzbekistan for basic general education for deaf and hard of hearing children studying together with hearing peers (inclusive education). The implementation of the developed requirements contributes to the availability of quality education for this category of students, ensuring their personal development, socialization and integration in society, as well as achieving an objective assessment of the results of education, taking into account the

special educational needs of children with hearing impairments, the continuity of basic educational programs at different levels of education.

Special requirements are defined for the structure of the main educational program of basic general education, for the conditions for implementing the main educational program (personnel, financial, material and technical), as well as for the results of mastering the main educational program for basic general education.

When developing special requirements, it was taken into account that when entering the third stage of education, children with hearing impairments represent a heterogeneous group of students. This is due to a number of factors, including the peculiarities of the organization and content of primary basic education in accordance with the state educational standard of the Republic of Uzbekistan primary general education of students with disabilities, the real practice of business and personal interaction of children with hearing impairments with hearing adults and children in various types of educational and extracurricular activities [2].

We emphasize that the leading trend in the modern system of primary basic education is the quality education of deaf and hard of hearing children, taking into account their abilities and special educational needs. The State Educational Standards of the Republic of Uzbekistan on primary general education for students with disabilities approved four options for adapted basic educational programs for deaf children and three options for adapted basic educational programs for hearing-impaired children. At the same time, primary general education, which ensures the transition to the level of basic general education, is received only by children with hearing impairments, deaf children studying on the basis of options, and hearing-impaired and late-deaf children [3].

Options c are designed to educate children with hearing impairments, who by the time they enter school have reached a level of development (including speech) close to the age norm, have a positive experience of communicating with hearing peers. These children receive primary general education in an environment of hearing peers and within the same period of study; in the learning process, a program of correctional work is being implemented, aimed at ensuring auditory and speech development, overcoming communication barriers and supporting the development of an adapted basic general educational program.

Variants of the adapted basic general education program primary general education are intended for the education of children with hearing impairments who have not reached a level of development (including speech) close to the age norm by the time they enter school. However, these children do not have additional health restrictions that prevent them from receiving primary general education in conditions that take into account their general and special educational needs, including those related to mastering verbal speech (in oral and written forms), and life competencies. This option assumes that students receive an education comparable in terms of final achievements with the education of hearing peers in an extended period (five or six years, taking into account preschool education: grades 1-5, grades 6-11) [4]. Achieving the planned results of primary general education is possible only if the corrective and developmental orientation of the entire educational process is ensured, which includes:

- organization of a special pedagogically created auditory-speech environment (with the constant use of various types of sound-amplifying equipment by children);
- special structuring of the content of education on the basis of increased attention to the purposeful development of verbal speech, the formation of life competence, the use of both general and special teaching methods and techniques;
- obligatory inclusion of special subjects of the correctional and developmental direction: "Development of speech hearing and pronunciation of speech", "Musical and rhythmic classes", "Development of auditory perception and speech technique", "Social and household orientation" [5].

Due to the characteristics of the student population based on the options for the adapted basic general education program of primary general education, as well as the educational conditions for their

implementation, compared with the adapted basic general education program of primary general education, there are certain differences in the learning outcomes of children, as well as in the real experience of their business. and personal interaction with hearing adults and children. This, of course, affects the choice of an educational route in the system of basic general education, it involves various organizational forms of education for children with hearing impairment:

- with the full inclusion of a student with a hearing impairment in the general educational stream (inclusive education) on the basis of the main or adapted educational programs;
- in co-education with peers with a similar disability on the basis of an adapted educational program or an individual curriculum.

These differences are taken into account when developing the structure of the basic educational program of basic general education, the conditions for its implementation, as well as educational technologies, its results, and methods for objectively assessing the achievements of students with hearing impairments. In the process of education, first of all, the peculiarities of perception and processing of information, the peculiarity of speech development, including the possibilities of perception and reproduction of oral speech, the need to use special methods, techniques and means to ensure the availability of quality education, expanding the social experience of children with hearing impairment are taken into account [2].

When designing special requirements for the personal results of basic general education for deaf and hard of hearing students, the significance of their awareness of their own capabilities and limitations of life due to hearing impairment was taken into account when determining life plans, including choosing a profession; willingness to make independent decisions; the formation of social competencies, including those related to adaptation and integration in a multicultural society based on moral values and meanings that reflect civic positions and personal aspirations, taking into account the rights and obligations of people with hearing impairments; development of opportunities for interaction with a fairly wide range of children and adults, including hearing people, in various types of educational and extracurricular activities, business and personal communication based on verbal speech and, if desired, on the basis of sign speech with deaf and hard of hearing people, taking into account their sociocultural traditions. Particular importance was attached to the formation of students' motivation for continuous education as a condition for the most complete professional and social activities, demand in society, and social mobility.

Thus, the more methods the pedagogue uses in the lessons, the more interesting the learning process and the higher the mastery level. The use of alternating methods serves to avoid uniformity, not to bore students and to form their motivation to study. For example, explanatory and interpretive reading methods, drawing or dramatizing the contents of what is read to form a literary reading; to speak selectively or briefly; watching movies and slides; description of the main characters; finding additional information on the subject being studied and other similar methods are used. In addition, various lexical and grammatical observations are made on the literary material, information from the read works is always included in various grammatical tasks.

Special attention is paid to the formation of written speech in the education of deaf children. It is known that the acquisition of written speech by deaf children is not only one of the tasks of education, but also the correction of their defect. Essays are of great importance in the formation of moral qualities and aesthetic taste in hearing impaired children. In addition, working on an essay in a school for deaf children will also help to solve correctional tasks. In order to perform these tasks in special educational conditions, various exercises are used to develop lexical-logical thinking of students of special institutions, improve their verbal memory, enrich their vocabulary, and teach them to make their sentences grammatically correct. In order to prevent errors in the written work of deaf children, special types of work aimed at eliminating agrammatism and alogism are also used.

In the school for deaf children, special types of work are carried out on the development of speech perception. Biosensory and monosensory perception of deaf children creates special conditions for their education [2].

Biosensory perception is called visual-auditory perception and is the main means of perceiving spoken speech. Monosensory perception is auditory perception, with the help of which deaf children are taught to speak not only in special classes, but also during the entire educational process. It is well known that the sensitivity of our sensory analyzers develops and improves with practice. Certain conditions and especially special exercises are necessary for sensory analyzers to reach the level of fine sensitivity.

In the process of working with deaf children, it became clear that the role of special hearing exercises is invaluable in developing auditory differentiations and establishing the connection between hearing and speech-movement kinesthesia.

In the development of auditory perception of children with hearing impairment, the first questions are: "What's the weather like today?", "Is it clear or cloudy?", "What color is the sky?", "What is the temperature?", "How hot is the sun?" from specific questions, gradually moving to questions that require a broad answer. For example, "How is the weather today?" Watch for a while and then tell me!", "What changes have happened in the plants since autumn came?". By the end of elementary school, students should be able to answer these types of questions with ease [5].

The conversation method based on children's observations and existing impressions is of great importance in science classes at the deaf children's school. Students should be able to formulate questions aimed at analyzing and describing the observed object. For this purpose, didactic games such as finding the object in the teacher's mind (in primary grades, children should choose the objects before the fall), finding the hidden object or the object in the picture according to its signs are used. After children learn to distinguish the main features of an object, they can easily analyze and describe it.

In conclusion, it can be said that high efficiency can be achieved in the process of development and education of hearing impaired children only if educational methods and tools are used in a comprehensive approach in special correctional subjects in deaf children's schools.

In addition, we emphasize that in solving the problems of correctional education of students with hearing impairment, it is necessary to implement the following:

- the process of developing connected speech is methodically correct, effectively organized taking into account the students' listening and speaking skills and capabilities;
- that the teacher and educator should demonstratively prepare mandatory and practical speech materials that need to be mastered during each lesson;
- organization of the process of speech development in a systematic and goal-oriented manner (first, a systematic and purposeful observation of linguistic evidence and phenomena).

Most of the grammatical knowledge should not be given ready by the pedagogue, but should be mastered by the student in the process of analyzing sentences with different structures, composing sentences and changing the form of speech material. Children with hearing impairments are taught native language definitions and rules not by memorization, but by drawing conclusions as a result of independent activities of students directed by the teacher. "How can one sentence be said in another way?" it is necessary to find a sufficient answer to the question. In order to ensure this, we recommend that deaf and hard-of-hearing children use innovative, modern methods suitable for them in their reading classes in boarding schools. At the stage of the first acquaintance with the work, it is appropriate to use mainly reproductive methods, as well as heuristic methods such as expressive reading of poems taught in previous lessons, telling a story on a free topic, narrating a work read independently [4].

The implementation of the above-mentioned works will improve the content of correctional work that eliminates the secondary speech defect in students with hearing impairment, increase its effectiveness and, as a result, ensure their integration into the life of society.

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