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Technology for Development of Speech Skills of Children with Coxlear Implants

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A B S T R A C T

The article deals with the creation of the necessary conditions for the successful development of speech in deaf children after cochlear implantation, the development of children's communication skills, the ability to hear sounds and speech, language skills, oral speech development, developmental features and corrective-developmental process. Ziga-specific features, as well as inclusive education and extracurricular activities to strengthen the ability of school students to form speech correctly.

A R T I C L E I N F O

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The problem of inclusive education and upbringing of children with disabilities is still relevant for the general and special education system. The choice of educational institution, program for this group of children, teacher cochlear implantation is still an important factor in the education and upbringing of children with hearing impairment. The approach to choosing a specialist to work individually with a child who has undergone a cochlear implant procedure is also controversial - should it be a deaf pedagogue or a speech therapist? What should be the education of children with cochlear implants - general, inclusive or integrated education? Today, we have a small and not always successful experience of speech development in children with cochlear implants.

In the practice of correctional pedagogy and special psychology there is a certain principle of differentiation of developmental disorders - the classification of dysontogenesis. The classification of developmental disorders is to define the boundaries that define the area of competence of the defectologist. The results of research and practical work in this area today allow expanding the skills of a specialist who provides special care to children with disabilities of various categories, as well as research opportunities in the field of new information.

A clear definition of the category of health of the child in which the correctional and pedagogical work is carried out, allows determining the methods and techniques of working with a group of new disorders of child development. This allows a teacher-defectologist to test and use a group of children with cochlear implants and hearing impairments correctly. Successful prosthesis with a cochlear implant does not support the idea that this group of children's hearing has been fully restored, as normal speech sounds and nonverbal volume and hearing acuity are not restored immediately after surgery. In our opinion, it would be useful to analyze the works of scientists and deaf educators on the mechanisms of speech development and auditory perception in deaf children. Because these studies are based on the richest experience in the development of tools to study the developmental characteristics of children after cochlear implantation, a system of correctional work on the development of auditory perception and speech communication.

O.B.Sirotinina, N.Yu. In her work, Shvedova shows that children's speech, in particular, is formed through speech activity (oral or written), and that their joint activity is combined with the process of imitating adults. In the process of communication, the child receives information through adults, just like a prism, about the world around him, the cultural and social environment, the means of labor and production, the motives and tasks of activity. To do this, the child has a minimum requirement: well-developed communication skills, analyzers that ensure the formation of these skills, a well-developed emotional-volitional field.

Scientists L.M. Bykova, L.A. Golovchits, S.A. Zikov, L.V. Neiman, L.P. Noskova, T.V. Nesterovich, E.N. Martsinovskaya, N.F. Slezina, F.F. Rau, N.D. Shmatko et al. Proved that the failure of the auditory analyzer not only leads to hearing impairment, but also the child's hearing impairment and inability to master the specificity of speech, its comprehension, pronunciation, vocabulary.

The level of language proficiency, developmental skills, and access to general education depend in many ways on the level of speech development of a hearing-impaired child.

A hearing-impaired child's full mastery of oral speech implies the development of the interlocutor's ability to understand the speech freely and to speak clearly and intelligibly to others. The formation of oral speech is based on the development of hearing in deaf children with the constant use of individual hearing aids.

Even the most modern hearing aids do not allow a deaf child to fully understand speech. Cochlear implantation is currently one of the ways to help children with severe hearing and deafness.

Cochlear implantation is the surgical insertion of a system of electrodes into a patient's inner ear, which in turn allows the preserved fibers of the auditory nerve (afferent fiber) to perceive sound information through electrical stimulation. Sensory impaired hearing is mainly manifested by damage to the inner ear, ie its hairy tissue. However, despite the significant damage to the sensory tissues, in most of these patients, the fibers of the auditory nerve are preserved, allowing the brain to transmit signals directly to the brain using electrical current.

Cochlear implantation technology has been used for almost a quarter of a century to help deaf children and adults. Local Deaf Educators E.L. Goncharova, I.V. Koroleva, O.I. Kukushkina, E.V. Mironova, O.S. Nikolskoy, A.I. Sataeva, N.D. Shmatko proved the need for complex psychological and pedagogical rehabilitation of children after cochlear implant surgery.

The cochlear implant is an implantable device that amplifies sounds from an external microphone and transmits them directly to the human auditory nerve in the form of an electronic pulse. The implant consists of parts such as a microphone, a battery, and a remote control.

A new phenomenon in deaf pedagogy is the change in the condition of the child during cochlear implantation and its subsequent rehabilitation [17-20]. Research E.L. Goncharova, O. I. Kukushkina, A.I. Sataeva argues that a child with a cochlear implant, whose speech development is not yet close to the age norm, should be included in a unified learning environment with the systematic support of a deaf educator.

Teaching a child with a cochlear implant with healthy peers is a relatively new phenomenon in the Uzbek education system. Since the independence of our country, systematic work has been carried out to introduce the requirements of world standards in the field of education. This includes the tendency to ensure that children with disabilities receive the same education as their healthy peers. Equality in education, inclusive education for all children is called inclusive education and has risen to the level of public policy today.

Inclusive education is a system that removes barriers between children with disabilities and healthy children, ensuring that children in need of a special approach to education receive education in harmony with all their peers. The experience of co-teaching such students in a special boarding school with hearing peers shows that social communication with peers and adults, a full speech environment, constant speech communication, communication habits of school students with cochlear implants are formed, this has a positive effect on their adaptation and socialization.

In the context of the implementation of the state educational standard of primary general education for children with cochlear implants, the acquisition of cochlear implant communicative skills by schoolchildren has a special meaning and significance. This is primarily due to the planned outcomes of mastering a customized general education program, i.e., communicative learning activities - with the ability to communicate in different types of learning and extracurricular activities based on oral and written speech. depending on. It is a basic educational activity for shaping the readiness of children to master the basic education program, acquiring knowledge, developing skills and competencies, including education and solving life problems.

The formation of oral communication skills in children with cochlear implants is effective in fulfilling specific pedagogical conditions:

- *Systematic development of students' oral communication and verbal behavioral skills;*
- *development of auditory-visual and visual-motor coordination, hearing of speech, auditory-visual perception of oral speech, formation of outdated skills of speech, acceptance of non-speech sounds (including music) as necessary, full development of speech ;*
- *work on the development of oral speech as a basis for full mental development of the child, comprehension of speech, identification and expansion of lexical resources, formation of the grammatical structure of speech, pronunciation, reading and writing;*
- *to develop the conscious use of oral speech in different contexts of communication.*

In accordance with the requirements of specific standards, pedagogical support focuses on the social adaptation of students with cochlear implants using a practice-oriented approach. In this regard, special attention is paid to the selection of the most commonly used speech material in life situations. In the process of transition from one age to another, the vocabulary gradually increases, the active vocabulary is renewed. Distinguishing active speech material is done by considering sections that are important to children.

In education and extracurricular activities, it is necessary to strengthen the ability of schoolchildren to form speech correctly: it is necessary to introduce more complex dialogue structures into independent speech, rather than simplification. In each lesson or extracurricular activity, it is important to offer students a sufficient amount of speaking material related to mastering the lesson content. It is necessary to systematically organize the subject and speech work unit of the child with cochlear implantation, and the content of the speech material should be as diverse as possible.

When teaching oral speech to children with hearing impairments, it is necessary to understand the text as a whole, to gradually implement and emphasize the main idea, to analyze it through phraseological and verbal details, to follow the global principle of speech perception.

Grammatical, phonetic, and phonemic features of speech material — all of which have led to the fact that children with cochlear implants have signs of constant backwardness in the basic sciences, especially in their mother tongue. When studying the grammatical basis of language, adding difficulties to the situation and asking semantic questions, composing sentences with a given word, agreeing on the subject and predicate in person and number, adjective and noun by gender, using difficulties, situations and prepositions, students make a mistake in matching the words in the sentence.

The condition for the effectiveness of teaching for such children is the pedagogical support of the teacher and the effective daily correctional support of the deaf educator and the decisive period of successful learning, the continuity of science teachers and their relationship with the deaf pedagogue. The need to revise the content of the program has made it clear that the success of inclusive education for implanted school students depends on well-organized deaf pedagogical support and requires new approaches. The main directions of correctional work of a deaf pedagogue:

- ✓ *overcoming the shortcomings of the pronunciation of the speech and its grammatical structure;*
- ✓ *development of hearing and phonemic comprehension;*
- ✓ *development of monologue writing;*

- ✓ *monitoring the student's progress in hearing correction after cochlear implantation in general subjects;*
- ✓ *Facilitate the acquisition of grammatical categories of the native language.*

Pupils with implants have some difficulty writing dictation. The existing system of work on the development of auditory cognition of deaf schoolchildren serves as a basis for preparing children with cochlear implants to receive text under dictation, as dictation is a type of spelling exercise in writing auditory perception of words and phrases. The school's deaf pedagogues have developed a system for preparing children with cochlear implants for dictation. In the course of the experimental work, we systematized the speech material that was difficult to understand and included it in the individual lesson program.

The work of a deaf pedagogue to prepare students with cochlear implants to write a text under dictation in the process of practical activities should begin with the practice of words that are difficult to pronounce in the dictation text, and the speech material should be presented in different contexts. Words with consonant sounds should be divided into parts, the student should be able to separate the parts of the word according to the ear, pronounce them in parts, read and memorize the whole spelling.

Corrective work to prepare schoolchildren to write texts under dictation after cochlear implantation includes: separating sentences, phrases and words from dictation text, composing answers to questions about the text, difficult to pronounce with a combination of consonant sounds distinguishing existing words, combining words in working sentences, differences in spelling of prefixes and suffixes, distinguishing between voiced and unvoiced, hard and soft consonants, distinguishing similar words by phonetic structure by ear, development of visual perception.

In conclusion, it should be noted that, in our opinion, the peculiarity of the system of accompanying children with cochlear implants is that the student's self-awareness, social adaptation among hearing peers, communication barriers 'q depends on doing and successfully mastering the curriculum.

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