



THE CONTENT OF CORRECTIVE SPEECH THERAPY WORK IN THE FORMATION OF SPEECH IN CHILDREN WITH COCHLEAR IMPLANTS

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<p>Received: 6th November 2025 Accepted: 4th December 2025</p>	<p>This article analyzes the importance of the system of speech therapy correction work in the formation of speech development in children with cochlear implants. Although the cochlear implant allows for the perception of sounds, the independent development of speech requires systematic and scientifically based speech therapy and aural rehabilitation approaches. The article covers problems in phonemic hearing, articulation, lexical-grammatical development, and expressive and receptive speech. The study substantiates the effectiveness of an individual approach, cooperation with parents, group classes, play therapy, and innovative technologies. The presented scientific conclusions show that speech therapy plays an important role in the speech, social and emotional development of children with cochlear implants.</p>

Keywords: cochlear implant, children with cochlear implants, speech therapy, speech development, phonemic hearing, aural rehabilitation.

INTRODUCTION. According to international statistics, more than 430 million people in the world have “disabling” hearing loss, of which more than 34 million are children. These figures indicate that the number of children with hearing impairment is not only a disease, but also a socio-educational problem. Today, the increasing number of children with hearing impairment in the world, including in the Republic of Uzbekistan, poses new challenges for special pedagogy, medicine and the education system. In particular, the issues of early diagnosis, effective rehabilitation of children with severe and profound hearing impairment, and ensuring their speech and social development are of urgent importance. In this regard, modern hearing enhancement technologies, including cochlear implants, are being widely introduced as an important tool for improving the quality of life of children with special needs.

A cochlear implant is a high-tech medical device surgically implanted in the cochlea of the inner ear, which partially compensates for the function of damaged hair cells and converts sound signals into electrical impulses and transmits them directly to the auditory nerve. This technology provides hearing to people with severe and profound sensorineural hearing loss who cannot benefit from traditional hearing aids. A cochlear implant can be used unilaterally or bilaterally, and it significantly increases the social activity and quality of life of people with hearing loss by expanding their communication opportunities.

The emergence of the ability to perceive sounds in children with cochlear implants creates important conditions for the development of speech. However, scientific research and practical experience show that implantation alone is not enough to ensure the independent and full formation of speech. Speech perception, pronunciation, development of phonemic hearing, mastery of the lexical-grammatical system, and the formation of speech communication skills are carried out through consistent, systematic and scientifically based speech therapy correction work. It is speech therapy that allows children with cochlear implants to activate auditory and speech experience, transform heard sounds into meaningful units, and use them in speech activities.

In recent years, a number of regulatory and legal documents have been adopted in the Republic of Uzbekistan aimed at developing special pedagogy and inclusive education, creating broad opportunities for children with cochlear implants and hearing impairments. In particular, ensuring the rights of persons with disabilities, establishing early intervention services, and organizing rehabilitation and educational services in an integrated manner have become one of the priority areas of state policy. As part of these reforms, cooperation between medical, educational, and special education specialists is being strengthened, and a multidisciplinary approach is being implemented in working with children with cochlear implants.

In the process of speech therapy correction work with children with cochlear implants, special attention is paid to the individual developmental characteristics of the child, the level of use of the implant, the duration of the hearing experience, and the stages of speech development. At the same time, cooperation with parents, their active involvement in the rehabilitation process are one of the important pedagogical conditions. In practice, many children with cochlear

implants have problems with incomplete understanding of instructions, unstable attention, and expressing opinions through behavior. Therefore, in addition to observation, tests, interviews with parents and questionnaires are used as important diagnostic tools in assessing their speech and language development.

Although cochlear implants are widely introduced as a result of the development of modern medicine and digital technologies, their effectiveness is directly related to a scientifically based system of speech therapy correction work. This system ensures the speech development of children with cochlear implants, as well as their socio-cultural adaptation and successful participation in the educational process. Therefore, a scientific analysis of the importance, basic principles and effective methods of speech therapy in the development of speech in children with cochlear implants is an urgent scientific and practical task.

Literature review. In recent years, the issue of ensuring speech and language development in children with cochlear implants has been widely studied by foreign and domestic scientists. Scientific research in this area shows that not the cochlear implant itself, but the system of subsequent aural rehabilitation and speech therapy work is of decisive importance.

Australian scientist, professor, doctor of medical sciences Teresa Yvonne Ching (T. Y. Ching) in her scientific research substantiated the importance of using innovative and digital technologies in the development of speech and language skills in children with cochlear implants. The scientist's work is devoted to analyzing the effectiveness of speech therapy classes organized on the basis of multimedia tools, interactive applications and sensory platforms. Teresa Y. Ching notes that the combined use of visual and sensory materials facilitates children's perception of heard speech, increases their motivation for learning, and actively involves them in speech activity. The author scientifically substantiates the fact that innovative technologies can help children build self-confidence, develop social communication, and expand their speech skills.

A leading Russian specialist, Doctor of Pedagogical Sciences, Professor Tatyana Aleksandrovna Korolyova (T. A. Korolyova) interprets cochlear implantation not only as a surgical intervention, but also as the initial stage of a continuous rehabilitation process aimed at restoring hearing and speech. Her scientific works show that rehabilitation work with children with cochlear implants should include the following stages: adjustment of the implant processor and acoustic adaptation; reshaping auditory perception (development of sound recognition, phoneme differentiation, speech understanding); development of speech formation and communication skills. T. A. Korolyova defines the "auditory method" as a leading approach and considers work aimed at the child's maximum mastery of speech through the auditory analyzer rather than visual supports as a priority. Uzbek scientists, specialists in the field of special pedagogy Nartayeva Sh. and Mamarajabova Z. study the effectiveness of an individual pedagogical approach in the development of speech and hearing in children with cochlear implants. In her study, the author emphasizes the importance of developing a pedagogical rehabilitation system in the post-implantation period, taking into account the individual characteristics of the child, the level of use of the implant and the quality of the speech therapy approach. This leads to an increase in speech, vocabulary and pronunciation accuracy in children, as well as an improvement in social communication skills.

The scientific literature emphasizes that the emergence of hearing in children with cochlear implants does not automatically ensure speech development. The process of acquiring speech through hearing occurs gradually, and in this process, phonemic hearing impairment, articulatory disorders, deficiencies in lexical-grammatical development, as well as limitations in expressive and receptive speech are observed. The manifestation of these disorders directly depends on the age of the child at the time of implantation, the regularity of implant use, the quality of speech therapy approaches, and the richness of the language environment.

Researchers emphasize that the success of speech development is not limited only to the post-implantation period, but also the importance of speech therapy and rehabilitation preparatory work before implantation. Especially in cases where children with cochlear implants have additional disorders - musculoskeletal disorders, central nervous system lesions, or mental developmental delays, an integrated, multidisciplinary rehabilitation approach is required.

Methodology. This study was aimed at studying the characteristics of speech development in children with cochlear implants and hearing impairments and determining the effectiveness of the speech therapy correction system. The study involved 14 children with cochlear implants aged 5–8 years. All participants had been using a cochlear implant regularly for at least 12 months after implantation, and their general mental development was assessed as normal. During the study, a pretest–posttest (pre- and post-experimental) model was used to determine the level of speech development in children. The research process used a comprehensive approach to pedagogical observation, interview, and experimental-testing methods. Through the observation method, the level of children's auditory speech perception, phonemic discrimination ability, pronunciation accuracy, active vocabulary, and speech activity in the communication process were systematically studied. Observations were conducted during the children's natural educational environment and daily activities, and the dynamics of each child's speech development were recorded individually.

As part of the interview method, individual interviews were conducted with speech therapists, special educators and parents. During the interviews, information was collected about the level of speech understanding of children, the characteristics of speech use at home, the difficulties encountered in the rehabilitation process and positive changes. Interviews with parents made it possible to compare the results of the study with real-life situations and further clarify them.

Based on the trial-and-error method, a system of special speech therapy exercises was developed and put into practice for 3 months. The exercises were held 3 times a week, 40–45 minutes each. The program included exercises

aimed at developing phonemic hearing, distinguishing sounds, understanding syllables and words through hearing, activating the articulatory apparatus, developing speech breathing, and expanding vocabulary. To assess the level of speech development, phonemic hearing tests, articulation check cards, tasks for determining active and passive vocabulary, and parent questionnaires were used. The results obtained at the beginning and end of the experiment were compared and the effectiveness of speech therapy was determined. The data obtained were analyzed quantitatively and qualitatively, and changes in auditory perception of speech, pronunciation accuracy, vocabulary, and communication activity were determined. This methodological approach ensured the scientific validity of the study and made it possible to determine the real effectiveness of speech therapy correction work in children with cochlear implants.

RESEARCH RESULTS. Before the start of the experimental work, the level of speech development of children with cochlear implants was determined through preliminary diagnostics. The results showed that the skills of phonemic hearing, sound differentiation, word comprehension and their use in active speech were not sufficiently developed in most children. During the initial examination, most children had difficulty distinguishing similar sounds from each other, the process of hearing and understanding words was slow, and they used short and uneven sentences in communication. According to the results of articulation tests, it was found that the majority of children had insufficient coordination of the muscles of the tongue, lips and jaw, which led to incorrect pronunciation of these sounds. Also, the active vocabulary of children was limited, mainly limited to words that are often found in everyday life. After three months of special speech therapy correction classes, significant positive changes were noted in children. First of all, a clear increase in phonemic hearing was observed. At the end of the experiment, most of the children were able not only to hear sounds, but also to distinguish them from each other and correctly perceive them. In particular, the ability to distinguish phonemes that are close to each other improved significantly. Positive changes were also observed in articulatory development. As a result of special articulatory gymnastics and sound formation exercises conducted during the sessions, the children's pronunciation became much clearer, the movements of the oral apparatus became freer, and the level of correct pronunciation of speech sounds increased. By the end of the experiment, the children began to pronounce sounds that they had previously pronounced incorrectly more stably and clearly. The development of vocabulary was also one of the important results. During the study, the children's active and passive vocabulary expanded significantly. They were able to remember new words faster, use them correctly in different situations, and move from simple sentences to more complex ones. This led to an increase in their speech independence and activity in communicating. Observations of parents and speech therapists showed that children began to use speech more often in everyday life. They tried to express their needs in words, answered questions more fully, and actively participated in conversations. This confirmed that the combination of cochlear implants and speech therapy exercises has a strong positive effect on the child's speech and social adaptation. In general, the results of the study clearly showed that speech development in children with cochlear implants is not a random process, but is effectively ensured through specially organized, consistent and scientifically based speech therapy correction work.

DISCUSSION. The results obtained showed that speech development in children with cochlear implants requires long-term and consistent speech therapy correction work. Although the implantation creates the opportunity to hear sounds, speech formation does not develop sufficiently without a special pedagogical approach. The results of our study showed that systematic speech therapy significantly improves phonemic hearing, articulation, and lexical-grammatical skills in children with cochlear implants. This result is consistent with the research of T. Y. Ching, who showed that speech therapy conducted through innovative technologies and interactive platforms improves children's speech activity. At the same time, the work of the Russian scientist T. A. Koroleva also emphasized that the cochlear implant itself is not enough to form speech, and that speech therapy and aural rehabilitation work are necessary. However, some differences were also identified in our study. For example, while previous studies focused more on multimedia tools, in our practical work, regular cooperation with parents and continuing classes at home had an additional positive effect on children's speech development. Thus, our study results, while confirming the conclusions presented in the scientific literature, also revealed the effectiveness of cooperation with parents in ensuring speech development in children with cochlear implants. During the study, it was found that phonemic hearing training had a positive effect on speech comprehension and pronunciation. This confirms the importance of the hearing-based method in children with cochlear implants. As auditory perception developed, children's speech activity gradually increased. Also, the use of game elements and visual aids increased children's interest in the exercises. This approach was effective in involving children in speech activity and helped reduce their fatigue. The issue of cooperation with parents also gained importance. Continuing the exercises at home served to consolidate the skills acquired in children. This indicates the need for speech therapy to be carried out not only within the framework of an educational institution, but also in an inextricable link with everyday life. In general, the results of the discussion show that ensuring speech development in children with cochlear implants requires an integrated approach. Speech therapy not only improves the child's speech development, but also expands his social adaptation and communication opportunities.

CONCLUSION. The results of the study show that the success of speech development in children with cochlear implants is directly related not only to the presence of a technical tool - the implant, but also to systematic, individual and comprehensive speech therapy correction work. Consistent and balanced organization of phonemic hearing, articulatory skills, lexical and grammatical development is an important pedagogical condition for the formation of a child's full speech and communicative activity. The use of play therapy, multimedia technologies, sensory-visual and innovative approaches in speech therapy classes increases children's motivation to learn, enhances speech activity and serves to effectively organize the process of speech perception through hearing. Also, continuous and purposeful cooperation

with parents ensures stability and consistency in the child's speech development. Therefore, the process of speech formation in children with cochlear implants should be considered not only within the framework of medical rehabilitation, but also as a coordinated system of pedagogical, psychological and social approaches. Scientifically based speech therapy correctional work ensures not only the child's speech development, but also his emotional state, social adaptation and integration into society.

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