

## ANATOMICAL AND PHYSIOLOGICAL MECHANISMS OF SPEECH

Kabirova Zarnigor Raxmonjon qizi  
Kokan State Pedagogical Institute  
Teacher of the Department of Special Pedagogy

Ibroximova Sarvinoz Anvarjon qizi  
Student Of The Kokan State Pedagogical Institute

### Abstract

To know the anatomical and physiological mechanisms of speech, that is, the organization of speech activity in terms of structure and performance, firstly, to imagine the complex mechanism of speech normally, and secondly, a differential approach to the analysis of speech pathology (disorder); thirdly, it allows correct determination of corrective action paths.

**Keywords:** Speech, brain, center, periphery, speech apparatus, voice, articulation department.

Speech is one of the complex mental functions of a person.

Speech movements are carried out through a complex system of organs, in which the activity of the brain plays the main role.

At the beginning of the 20th century, the point of view connecting the function of speech with the existence of special "separate speech centers" in the brain was widespread.

I.P. Pavlov gave a new direction to this view. He proved that the localization of speech functions of the cerebral cortex is not only complex, but also variable, and he called it "dynamic localization".

1. Currently, according to the research conducted by P.K. Anokhin, A.N. Leontyeva, A.R. Luria and other scientists, the basis of any mental functions is not individual "centers", but a complex system of functions located in different parts of the central nervous system.

Speech is a special and high-level form of communication unique to humans. In the process of speech communication, people exchange ideas and influence each other. Speech communication is done through language. Language is a system of phonetic, lexical and grammatical tools. The speaker chooses the necessary words to express his opinion, connects them based on the rules of language grammar, and pronounces them through the articulation of the speech organs.

In order for human speech to be understandable and meaningful, the movements of the speech organs should be clear and correct. At the same time, these actions should be automatic, which can be performed without special voluntary effort. In fact, it will be like that. Usually, the speaker only controls his thoughts, he does not even think about the position of his tongue in his mouth when he breathes, etc. This happens as a result of the speech pronunciation mechanism. In order to understand the movement of the speech pronunciation mechanism, it is necessary to have a good knowledge of the structure of the speech apparatus.

The structure of the speech apparatus. The speech apparatus consists of two parts: central (or controlling) and peripheral (or executive) speech apparatus. The central speech apparatus is located in the brain. It consists of pathways passing through the cerebral cortex, subcortical nodes, nuclei from the core (primarily in the medulla) and nerves to the muscles of voice, breathing, and articulation. Speech,

like manifestations of other higher nervous activity, is formed on the basis of reflexes. Speech reflexes are related to the activity of different parts of the brain. However, some parts of the cerebral cortex play a key role in the formation of speech.

These are the forehead, temple, and nape of the left (right in the case of the elderly) hemisphere. An active participant in speech activity in these parts of the cerebral cortex:

1. Speech quality analyzer;
2. Speech vision analyzer;
3. There is a speech hearing analyzer.

The speech analyzer is located in the left frontal part of the cerebral cortex and is called the "communication center". This part participates in the emergence of oral speech. The speech auditory analyzer is located in the left temporal part of the cerebral cortex and is called Wernicke's center. In this part, the process of receiving foreign speech takes place. The posterior lobe of the cerebral cortex plays a major role in speech understanding. It is considered the visual center of the brain and serves to master written speech. Subcortical nuclei control the speed and expressiveness of speech. Conductive roads. The cerebral cortex is interconnected with peripheral speech organs. Two types of nerve pathways are involved: centripetal and centripetal. Centripetal (motor) nerve pathways connect the cerebral cortex with the controlling muscles of the peripheral speech apparatus. The efferent pathway starts from Broca's center of the cerebral cortex.

The peripheral speech apparatus consists of three sections:

- 1) respiratory department;
- 2) voice department;
- 3) articulation department.

The respiratory department includes the chest, bronchi and trachea. Pronunciation of speech is inextricably linked with breathing. Speech is produced in the phase of exhalation. In the process of exhalation, the air stream performs the function of sound generation and articulation at the same time. It is understandable that a large reserve of air is needed for a long exhalation. Therefore, during speech, the volume of air intake and exhaust increases (about 3 times), and also increases the pressure of the air flow.

The voice department consists of the larynx and the accompanying vocal cords. The larynx is the part of the airway after the nasal cavity that allows air to pass into the trachea and prevents solid and liquid substances from entering it. Because the larynx is located in the front of the neck, the larynx is especially visible in thin people. This lump is called "larynx diamond". He moves easily when he stutters, coughs, and sings. It consists of odd ring-shaped, horn-shaped and double cup-shaped, horn-shaped branches. The base of the hilt is made up of tendons connected to each other by means of contracts, and movement in the burins occurs with the help of a special muscle apparatus. Vocal cords are located in the larynx, and they take a certain position when breathing, speaking loudly or softly. Due to the vibration of the vocal cords, the air flow that is emitted becomes the frequency of vibration on the vocal cords. These vibrations are transmitted around and we perceive it as sound.

Articulating department. The main members of the articulatory department are: tongue, lips, jaw (upper and lower), hard and soft palate, alveoli. Among them, the tongue, lips, soft palate and lower jaw are active, and the rest are passive organs. The main member of the articulatory department is the tongue. The tongue is a muscular organ. When the jaws touch each other, it fills almost the entire oral

cavity. The front part of the tongue is mobile, the white part is immobile, and is called the "root of the tongue". The tip, front, side and white sides of the movable part of the tongue are distinguished. The complex system of muscles of the tongue makes it possible to change their shape to a large extent. It is of great importance, because it participates in the formation of all vowels and almost all consonants (except for labial sounds). The lower jaw, lips, teeth, soft and hard palate, and alveoli are also involved in the production of speech sounds. The necessary condition for the work is aimed at rational construction of classes, determination of optimal visual loads, use of corrective and typhlotechnical tools, as well as elimination of deviations in psychophysical development. is the organization of special remedial training. When the child enters school, the role of the family, parents and teachers in the issues of maintaining vision, hearing and creating special conditions for education, taking into account the real risk factors for disorders: the age and individual characteristics of the child, heredity, gender, lifestyle factors. In the process of interaction with a child with impaired vision or hearing, adults must explain all their actions, which allows the child to perceive information, explore the world around him and learn using safe analyzers.

## References

1. Ayupova.M.Y. Logopediya. "O'zbekiston faylasuflari milliy jamiyati" nashriyoti. Toshkent - 2007
2. Axmedova Z.M, Ayupova M.YU, Nurkeldiyeva D.A.«Barmoqlar mashqi va logopedik o'yinlar», Toshkent «Yangi asr avlodi» 2007
3. Xabibullo o'g'li, Xovodillayev Murodjon, and Komilov Otabek Iqboljon o'g'li. "ESHITISHIDA NUQSONI BO 'LGAN BOLALARNING ESHITISH IDROKINI RIVOJLANTIRISH TEXNOLOGIYALARI." Science Promotion 2.1 (2023): 28-34.
4. Daughter, Husanova Iroda Ulugbek. "LOGOPEDIC WORK WITH DYSARTHIC CHILDREN." Science Promotion 1.1 (2023): 117-122.
5. Мирзаолимов, Мирзохид Мирзавалиевич, and Кахрамон Адашалиевич Ниёзов. "ФЛАВАНОВИДНЫЕ КОНСЕРВИРУЮЩИЕ РАСТИТЕЛЬНЫЕ ЭКСТРАКТЫ." Educational Research in Universal Sciences 2.6 (2023): 187-193.
6. Dilshodjon o'g'li, Xonboboev Shoxruxbek. "KELAJAK PEDAGOG-PSIXOLOGLARNI MA'NAVIY-MA'VIY-MA'RIFIY FAOLIYATGA TAYYORLASHNING IJTIMOY-PEDAGOGIK ZARURIYATI". Galaxy xalqaro fanlararo tadqiqot jurnali
7. Oppoxo'jayev, Xojixuja, and Nozima Yakubova. "METHODS USED IN FORMING NATIONAL ETIQUETTE SKILLS IN PRIMARY CLASS STUDENTS OF SPECIAL SCHOOLS." Молодые ученые 1.2 (2023): 103-107.
8. Xanbabayev, Shohruxbek. "Bo'lajak pedagog-psixologlarni ma'naviy-ruhiy tarbiya faoliyatiga tayyorlashning ijtimoiy pedagogik zarurati." O'zMU xabarlar-BECTHIK HYU3 (2022).
9. Azimjon o'g, Oppoxo'jayev Xojixuja. "Inclusive Education System Progress of the Process." INTERNATIONAL JOURNAL OF SOCIAL SCIENCE & INTERDISCIPLINARY RESEARCH ISSN: 2277-3630 Impact factor: 7.429 11.11 (2022): 199-206.
10. Daughter, Musayeva Farangiz Norbek. "Laws of mental development of children with hearing impairment." Science Promotion 1.1 (2023): 36-43.
11. QIZI, XONBABAYEVA MADINABONU ASQARJON. "Kasbiy faoliyatda zamonaviy logopedni kompetentligini rivojlantirish yo'llari." International Conference on Developments in Education Hosted from Delhi, India. Scienceweb-National database of scientific research of Uzbekistan, 2023.