Western European Journal of Modern Experiments and Scientific Methods
Volume 2, Issue 6, June, 2024
https://westerneuropeanstudies.com/index.php/1
ISSN (E): 2942-1896 Open Access| Peer Reviewed

NEUROLINGUISTIC APPROACH AS A METHODOLOGICAL PROBLEM

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Abstract: this article provides the most general information about the new field of linguistics - neurolinguistics, general objects and problems studied by this field, as well as scientific information about the history, present day and sources of the direction. Describes the neurolinguistic approach, its emergence, current issues of teaching based on the neurolinguistic approach, the possibilities of using the neurolinguistic approach in pedagogy, the specific features of using best practices in the teaching process.

Key words: neurolinguistics, neurolinguistic approach, brain, neuron, linguistic norms, creative thinking, independent thinking, linguist, psycholinguistics.

Introduction. The 21st century, as an age of intellectual potential, thinking and spirituality, opens up new horizons for humanity, but also creates acute problems that we have not seen or faced before. Pedagogues, in today's complex times, in addition to teaching young people in the spirit of the times, think about the future of humanity, our Motherland and our people, and carry out educational work aimed at encouraging young people to virtue, honesty, kindness and tolerance. is required to increase.

Changes in all spheres are clearly visible in the modernizing Uzbekistan. The reforms implemented on every front are giving their results rapidly. It is known from the experience of developed countries that organizing education based on a new approach is the most effective method that guarantees a good result in the development of the socio-economic, spiritual and educational sphere. The introduction of various technologies and scientific media in education made it possible to provide a large amount of information in a short time. This allows the student to increase the necessary educational material in a short time from the first lesson. With this goal in mind, the use of intensive teaching technologies is an effective way to increase the educational material.

Neurolinguistics is a new branch of linguistics that studies the relationship between language and the structure and function of the brain. It appeared to meet the needs of clinical diagnostic tasks. Its purpose is to observe and control the use of the patient's speech style (interview, graphic, narrative, reading, writing, etc.). For neurolinguistics, observing the speech and behavior of people with brain damage while learning two or more languages is a very important issue.

The main part. Neurolinguistics historically emerged in the 19th century in the age of aphasiology, the study of linguistic deficits (aphasias) caused by brain damage. Aphasiology attempts to link structure to function by analyzing the effects of brain injuries on language processing. One of the first to make the connection between a specific brain area and language processing was the French surgeon Paul Broca, who performed autopsies on many people with

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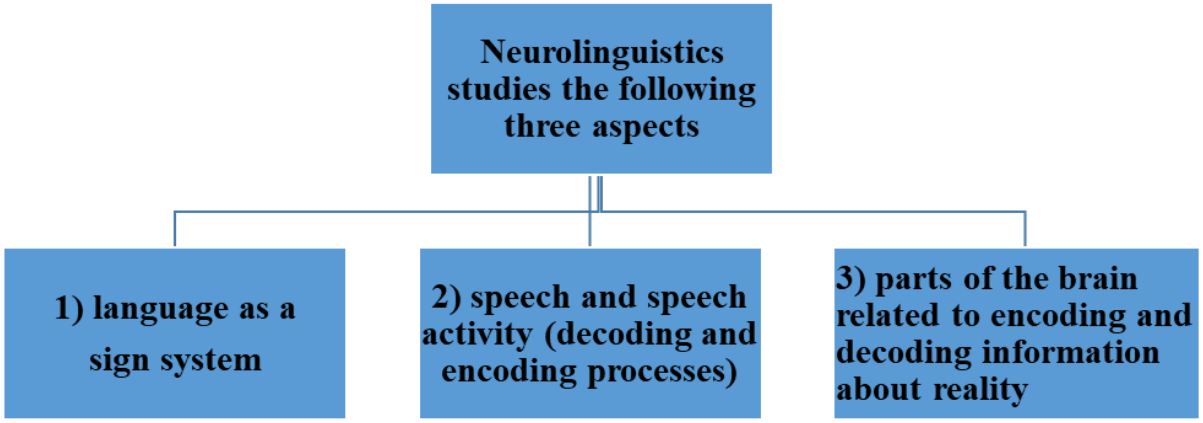
speech disabilities, and most of them had left frontal lobes. discovered brain damage in what is now known as Broca's area.

Phrenologists in the early 19th century claimed that different brain regions performed different functions and that language was mainly controlled by the frontal lobes of the brain, but Broca's research was the first to provide empirical evidence of such a relationship. It has been described as "groundbreaking" and "fundamental" for the fields of neurolinguistics and cognitive science. Later, Carl Wernicke, Wernicke's area was named after him.

The term neurolinguistics is credited to Edith Crowell Trager, Henry Hecaen, and Alexander Luria in the late 1940s and 1950s. Luria's book, Problems in Neurolinguistics, is probably the first book on neurolinguistics. Harry Whitaker popularized neurolinguistics in the United States in the 1970s, founding the journal Brain and Language in 1974.

Neurolinguistics is closely related to the field of psycholinguistics, which seeks to elucidate the cognitive mechanisms of language by applying traditional methods of experimental psychology; today, psycholinguistic and neurolinguistic theories often inform each other, and there is much collaboration between the two fields.

Neurolinguistics (Greek: neuron - vessel, nerve, nerve and Latin: lingua - language) is a science that studies the brain mechanisms of speech activity and changes in the speech process caused by local damage to the brain.



Therefore, all aspects are studied in interdependence without separation from each other, that is, the language system interacts with the brain substrate of linguistic behavior (lat. substratum - base, ground, basis, in this case, the brain base). is learned in relation. Thus, neurolinguistics focuses on the diagnosis and treatment of various types of speech disorders.

Neurolinguistics as an independent science arose on the basis of (biological) linguistics, at the intersection of neuroscience, psychology and linguistics, and it studies the language system in interaction with the brain substrate of linguistic processing. Neurolinguistics is interconnected with linguistics, psycholinguistics, physiology, neurophysiology, neurology, psychology and neuropsychology.

The role of brain injury in the etiology of speech disorders was mentioned by Hippocrates 400 thousand years before Christ. But its systematic study began in the second half of the 19th century. Baudouin de Courtune, A. Schleicher, G. Wernicke, V. A. Bogoroditsky, L. B. Sherba, R. Yakobson, L. R. Zinder, etc., showed interest in the facts of speech disorders. can be found in the research of scientists.

Neurophysiological and linguistic aspects of speech disorders in neurolinguistics T. Alajuanin, A. Ombredan, M. Duran, K. Konrad, K. Brain, F. Grevel, R. Yusson, Yu. It is covered in the

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works of scientists such as Barbiz, K. Kohlmayer, A. Leishner, P. Milner. A.R. Luria conducted research based on the work of L.S. Vygotsky, I.P. Pavlov and P.K. Anokhin. Various phonological, grammatical, lexical and semantic disorders are described by these researchers. Neurolinguistics also focuses on the study of non-aphasic forms of speech disorders (speech agnosia, apraxia, alexia and agraphia).

In 1836, at one of the meetings of the medical society in a small town in France, an ordinary doctor Marc Dax asked the chairman of the society for permission to give information about his observations. The following meaning was reflected in his text: "I observed speech disorders in all patients with damage to the left hemisphere of the brain, and none of the patients with damage to the right hemisphere had speech disorders. So, the left hemisphere of the brain is responsible for speech, that is, speech centers are located there." Until now, it was assumed that both hemispheres of the brain are responsible for speech. But he did not confirm his opinions with anatomical examinations, although it was possible) and did not publish them. That is why scientists did not even pay attention to the information given orally by M. Dax that day, and this correct opinion was soon forgotten.

In 1861, a young French scientist, anthropologist Paul Brock, observes a patient with impaired speech and paralysis of the right side of the body. This patient will die soon. When his brain was opened and examined, an infarct center was identified in the back of the lower frontal lobe of the left hemisphere (this area was later called Brok's center). The brain of this patient is still kept in the Medical Museum in Paris.

Although the patient understood the speech of the people around him, he could not speak, he only made the sound "ta-ta-ta". This type of speech disorder was later called "motor aphasia". Since that time, the search for different centers in the brain is great Shortly after, the German psychiatrist K. Wernicke discovered the sensory speech center in 1874, observing the speech disorder when the upper lobe of the left temporal lobe was damaged.

In 1876, Ferrier discovered the auditory center in the temporal lobe, in 1881, Munk discovered that dogs "did not see and recognize things" when the back part of the brain was removed, and in the same year, Exner discovered a writing disorder when the back part of the middle frontal lobe was damaged.

Of course, these discoveries surprised the scientists of that time. They start looking for different centers in the brain, even the centers of consciousness, memory, thinking. From this period, the direction of "localizationism" in science appears. The phrase "localization" means "place" in French. In 1870, Finkelburg opposed the localizationists and said that "asymbolia" develops when the cortex of the brain is damaged. According to him, as a result of the impairment of the ability to use symbols, speech activity, familiar and different things are impaired. performance of conscious actions is disturbed.The famous English neuroscientist D. Jackson criticizes the localizationist view based on his observations in 1864-1874.

D. Jackson was mainly interested in the dynamic aspects of speech. He said that "locating the lesion in the brain that causes the speech disorder" and "locating the speech itself" are two different things.

D. Jackson focuses on the complete loss of speech function in aphasia. In a patient with aphasia, goal-directed speech may be impaired, but emotional speech is preserved, he believes. For example, a patient can say a word in a state of affect, but cannot speak voluntarily. D. Jackson says that a person who has "lost his speech" does not mean that he is "bereft of words", because there is also an unintelligible part of the word. Therefore, although the thinking process of a

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patient who is "deprived of speech" is slightly reduced, he is still able to think. D. Jackson said that goal-oriented speech is related to the left hemisphere of the brain, and emotional speech is related to the activity of the right hemisphere.

D. Jackson was one of the first to put forward the idea of the complex structure of MNS functions. According to him, each function consists of 3 levels: "lower" (spinal cord, brain stem), "middle" (motor and sensory centers of the cerebral cortex) and "higher" (brain). forehead piece of). When the "higher" centers are damaged, not only pathological symptoms appear, but also positive changes are observed: the "lower" people are freed from the control of the "higher" centers and increase their activity. An example of this is the strengthening of spinal reflexes when the central pyramidal tracts are damaged. D. Jackson said that if in aphasia the impairment of speech, reading and writing skills are negative symptoms, then preservation of emotional speech and understanding of someone's words are positive features. He announced in 1868 that aphasia is observed not only when the left hemisphere of the brain is affected, but also when the right hemisphere is affected. These patients were obese. These conclusions of D. Jackson motivated the study of functional asymmetry of the brain. Later, several centers were discovered in the cortex of the large hemispheres of the brain. Therefore, scientists believe that D. Jackson was the first to put forward the theory of "functional asymmetry of the brain".

Conclusion. So, neurolinguistics is a combination of the words neuron and linguistics and studies the function of nerve cells in the human brain, that is, neurons in the formation of words in speech. Neurolinguistics is a science that studies the brain mechanism that ensures the formation and understanding of speech.

Much work in neurolinguistics involves testing and evaluating theories advanced by psycholinguists and theoretical linguists. In general, theoretical linguists propose models to explain the structure of language and how linguistic information is organized, psycholinguists propose models and algorithms to explain how linguistic information is processed in the mind, and neurolinguists analyze brain activity to determine what biological structures are.

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