

THEORETICAL PERSPECTIVES ON PSYCHOLOGICAL AND NEUROLOGICAL APPROACHES TO LANGUAGE LEARNING

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Abstract: Language acquisition constitutes one of the most intricate cognitive phenomena, wherein psychological and neurological determinants exert a decisive influence. This article investigates the dynamic interrelation between the human brain and psyche in the acquisition of language, with a critical emphasis on the fundamental factors that shape and mediate this process.

Key words: language acquisition, speech development, cognitive approach, social learning, zone of proximal development (zpd), neuroplasticity, motivation, behaviorist approach, developmental stages, psycholinguistics

Psychological approaches reveal that language learning is closely linked to factors such as motivation, attention, and memory. Emotional attitudes toward the language and the conditions of learning also determine the effectiveness of the educational process. In this regard, the social environment and cultural factors play a significant role, directly influencing the process of language acquisition. Within this approach, cognitive, social learning, and psychoanalytic theories are considered particularly important.

Neurological approaches investigate the neural networks and patterns of brain activity underlying the acquisition of language. Neuroplasticity—the adaptive capacity of the brain—provides a critical explanation for the disparities observed between children and adults in language learning. The process of speech acquisition is profoundly interwoven with psychological determinants, and their integration fosters the emergence of novel theoretical frameworks. For example, the extent of cerebral plasticity in childhood (a neurological variable), in conjunction with the social learning environment (a psychological variable), decisively shapes both the speed and efficiency with which language is acquired.

The processes of language learning lie at the intersection of psychology and philology, where various factors play a significant role in both first and second language acquisition. The first language, or mother tongue, is acquired in a natural environment without conscious effort, beginning even before birth through exposure to sounds, and later reinforced through everyday communication. This process occurs spontaneously. For children growing up in a bilingual environment, the same process takes place with two languages. It is important not to confuse this with the conscious study of a second language. A child passes through specific developmental stages in language learning, which were studied by the psychologist L. S. Vygotsky.

Vygotsky's stages of speech development:

1. Social speech (0–3 years)
2. Egocentric speech (3–7 years)
3. Inner speech (after 7 years)

One of Vygotsky's most important theories in developmental psychology is the concept of the *Zone of Proximal Development (ZPD)*. This idea is based on understanding the learning process and the role of social interaction in development. Through his sociocultural theory, Vygotsky presented the fundamental principles of development, according to which learning and

development occur through social and cultural communication. In this view, a child's development is not only determined by genetic factors or independent learning but is also shaped through interaction with others. The central idea of the ZPD is that when a child struggles to complete a task independently, they can successfully accomplish it with the guidance of a more experienced individual.

The process of language learning is one of the most complex yet fascinating areas of human neurology. Age plays a significant role in language acquisition, particularly during the so-called *critical period*, which is associated with a decline in brain plasticity. During this period, neurons in the brain are highly adaptable for learning language. Language, speech acquisition, and development are therefore closely linked to different stages of age.

During this period, phonological, lexical, and grammatical development occurs. In adolescence, the brain retains a high degree of neural plasticity, although language-related processes begin to slow down. Grammar is consolidated, the ability to form complex sentences improves, and communication skills on complicated topics develop. At this age, the capacity to learn new languages remains high, but pronunciation and speaking may present challenges. In adulthood, language and speech development become more structured, and adults often face difficulties in acquiring phonological and grammatical features of new languages. Additionally, language abilities may decline due to neurological conditions such as aphasia.

In psychology, there are several approaches to studying speech and language. One of the most well-known is the behaviorist approach, which views language learning as a response to external stimuli. In this process, a child's behavior is strengthened through positive reinforcement (rewards). Skinner explained language through conditioned reflexes and learning, interpreting the process as the regulation of behavior. For example, when a child says the word 'father,' they may receive a smile or praise from their parents. This positive reinforcement increases the likelihood that the child will repeat the word. Motivation is emphasized in this approach as a key factor. It is considered one of the most important elements in language learning, as the more interesting and useful the learner finds the language, the more effective the learning becomes. This occurs through both intrinsic and extrinsic motivation.

Cognitive approach - according to this approach, language learning is closely related to a child's intellectual development. Jean Piaget viewed language as an integral part of the process of knowing, defining it as a means of understanding the world. A child acquires new knowledge based on their experiences and establishes logical relationships between them. For example, when a child learns the word "car," they may connect it not only to a real car but also to a toy car. Through observed, heard, and perceived experiences, the child applies new concepts in a logical order.

Social approach - this approach explains language learning as a product of social interaction. Lev Vygotsky considered language as a tool for communication among people and emphasized that a child's speech develops through interaction with adults and peers. In the concept of the *Zone of Proximal Development (ZPD)*, the guidance of adults or more experienced individuals is highlighted as an important factor. For instance, a child acquires new words and grammatical structures by conversing with adults or imitating their speech.

Psychological and neurological perspectives offer profound insights into the complexity inherent in language acquisition and the formation of speech. The psychological approach foregrounds

the role of motivation and emotional scaffolding, whereas the neurological approach is primarily concerned with examining the specialized functions and mechanisms of the brain.

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