



ACQUISITION OF THE CONCEPT OF TIME IN CHILDREN

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Article history:	Abstract:
<p>Received: 20th July 2025 Accepted: 14th August 2025</p>	<p>This article analyzes the process of developing the concept of time in children from a psycholinguistic perspective. Additionally, it highlights the study of the concept of time within the framework of world linguistics and Uzbek linguistics, as well as the features of expressing time units through linguistic means. The study utilizes the results of psycholinguistic experiments, explains the stages of formation of basic time units in children, such as "yesterday-today-tomorrow," and puts forward proposals for mastering the concept of time in the educational process.</p>

Keywords: Psycholinguistics, time, language acquisition, language instinct, semantics, space

I. INTRODUCTION. The concept of time holds a special place in the process of human cognitive development. Time is not merely a general form of perceiving reality, but also one of the main cognitive categories that shapes an individual's worldview and speech activity. Although research on the formation of the concept of time in children has employed various approaches, their findings converge on a common point: the perception of time is closely intertwined with a child's psychological development and the acquisition of linguistic tools. The assimilation of the concept of time in children occurs through complex stages.

II. LITERATURE REVIEW. As Piaget (1969) emphasized, in a child's thinking, the perception of time is closely linked, first and foremost, with space and movement. The perception of time is formed in the child's brain through the integration of sensory, memory, and cognitive mechanisms. Fraise (1963) interpreted time as "a mechanism that regulates the sequence and duration of events in human consciousness." Thus, for a child, the concept of time is not simply knowing how to read a clock, but rather the process of understanding causal relationships between events and grasping the "before-after" connections. Piaget conducted an in-depth scientific investigation into the formation of the concept of time in children's thinking and elaborated on this issue in a separate monograph. According to the scientist, the concept of time does not exist in a child's mind in a ready-made form but develops throughout the stages of cognitive development. In his research, Piaget demonstrates that a child initially confuses time with other physical quantities. For example, an object moving faster is

interpreted as taking more time or covering a longer distance. This phenomenon confirms the relatively late formation of the concept of time. In Piaget's experiments, children were presented with scenarios where two different objects moved in the same direction but at different speeds and distances. For young children (approximately 5-7 years old), events remain a category perceived only in sequence. Between the ages of 7 and 10, a child gradually begins to distinguish time from distance and speed, but confusions related to time still occur during this period. Only from the age of 11-12 does a child achieve an understanding of time as an independent category and demonstrate the ability to logically explain the relationship between distance, speed, and time.

From a linguistic perspective, the acquisition of the concept of time is clearly evident in the emergence of time categories in a child's speech. For example, children first use deictic units such as "now," "yesterday," "tomorrow," and later master the use of grammatical tense forms. Psycholinguistics studies this process as a unity of thought and speech, explaining how the concept of time is formed through language.

The issue of the formation of the concept of time in children is studied at the intersection of psychology, linguistics, cognitive science, and psycholinguistics. The theoretical foundations of this problem are linked to the scientific research of J. Piaget, P. Fraise, and others. In his work "The Child's Conception of Time" (1946/1969), Piaget investigated the perception of time in close connection with the processes of understanding space, movement, and causal relationships. In these experiments, mainly children aged 6-12 participated as subjects, who were given tasks related to the sequence



and duration of events. For example, Piaget showed a picture of two people walking along paths of different lengths, asking children to determine which one walked faster or for a longer time. As a result, children aged 6-8 typically drew conclusions based on distance, assuming that whoever traveled the longer path had walked for a longer time. Children aged 8-10 have developed the ability to simultaneously consider both the speed and duration of movement. After the age of 10-12, the ability to distinguish time as a relatively independent category from space and to compare events based on their duration has formed (Piaget, 1969).

III. METHODOLOGY AND EMPIRICAL ANALYSIS.

P. Fraisse (1963) studied time perception more comprehensively as a psychological process. In his experiments, participants listened to sound signals of various durations and determined which ones were longer or shorter. According to Fraisse's theory, for a child to learn to consciously perceive time, they must first master experiences based on rhythm and repetition. Therefore, music, games, and rhythmic exercises enhance children's perceptual abilities.

In recent years, the issue of time perception has been thoroughly investigated. For example, Block and Zakay (1997) proposed the "cognitive load theory," demonstrating that the distribution of attention directly affects time perception. If a child focuses more intently on one activity, they subjectively perceive time as shorter; when distracted, time seems to stretch out. These findings further scientifically reinforced Piaget's theory.

Psycholinguistics, in studying the cognitive mechanisms of the speech process, considers the formation of the concept of time and its expression through linguistic means as one of its central issues. For a child, understanding time is not only a biological or psychological process but also a socio-cognitive experience formed through speech activity.

As L. S. Vygotsky (1934) noted, a child's thinking and speech develop in dialectical unity. The process of perceiving the concept of time is also initially formed through social interaction. For example, adults introduce time categories to a child through sentences like "You went to kindergarten today" or "We will go for a walk tomorrow." By hearing such linguistic units, a child forms the concept of time in their consciousness.

Psycholinguistic research by D. Slobin (1985) shows that children use "operational principles" in the process of language acquisition. Mastering deictic units related to the category of time ("yesterday," "today,"

"tomorrow") is considered an important stage. In the subsequent stage, the child learns to use grammatical tense forms.

IV. RESULTS. The expression of the concept of time in speech has been extensively studied in world linguistics. For instance, B.L. Whorf (1956) emphasized the cognitive deterministic nature of language, demonstrating that the concept of time is conceptualized differently across various languages. Lakoff (1987) and Fillmore (1977) interpreted time concepts on a metaphorical basis. For example, the English phrase "time is money" links time with economic value.

Fillmore (1977) explained that time is formed in language through "frames." Each language possesses its own time frame, and in a child's speech, these frames are formed based on social experience. For example, while the concept [weekend] exists in English, it is expressed as "hafta oxiri" (end of the week) in Uzbek.

According to Slobin's (1985) research, children whose native language is English begin using tense forms at the age of 3-4 years, but they often confuse time adverbs (yesterday, tomorrow). A similar situation has been observed in German children; however, due to the obligatory tense forms of verbs, they learn to use them correctly much earlier.

In world linguistics, the category of time plays a central role in a child's speech and cognitive development. In Uzbek linguistics, however, the acquisition of the time category has not yet been studied through comprehensive psycholinguistic experiments.

American psycholinguist Steven Pinker emphasizes the connection between human speech and thought in his famous work "The Language Instinct" (1994). According to him, language is not a simple social convention, but an instinctive ability biologically shaped by the human brain. The concept of time is also understood through language and gradually forms in a child's consciousness. Pinker also explains the process of understanding time in children using grammatical structures: "Children acquire tense and aspect not by rote memorization, but by unconsciously analyzing patterns in the speech they hear" [12;127]. Thus, for a child, understanding the category of time is closely linked to expressing it through grammar. In English, the past tense is denoted by the suffix "-ed," while in Uzbek, the tense category is formed using morphemes such as "-di," "-gan," and "-moqda."

According to psycholinguist H.H. Clark, a child first assimilates spatial categories (above, below, in front, behind), and later begins to form temporal categories



(before, after, now) based on these concepts. He writes: "Children's understanding of time expressions is deeply grounded in their understanding of spatial relations" [2;37]. This conclusion aligns with the ideas of Piaget and Pinker, namely that a child primarily understands time through spatial metaphors. For example, in English, expressions like "ahead of time" or "behind schedule" are derived from words denoting spatial direction. Clark also outlines the age stages of a child in the process of semantically assimilating the concept of time. According to him, a 3-4 year old child understands only words like "now" and "later," and after 6-7 years of age, they begin to correctly use time units such as "yesterday," "today," and "morning" in their speech.

Psycholinguistics views the process of mastering the concept of time in children as a dialectical relationship between speech activity and cognitive development. In the process of mastering the category of time, the child:

1. At the phonetic level - acquires units expressing time.
2. At the lexico-semantic level - learns to distinguish the meanings of words related to time. At this stage, the child often confuses "yesterday" and "tomorrow."
3. At the grammatical level - masters the expression of time through morphological forms using tense suffixes.
4. At the pragmatic level - learns to correctly use units of time in real communicative situations.

Thus, research on the concept of time demonstrates that a child acquires an understanding of time not only through cognitive development but also through the practical application of linguistic tools. In this process, the child first learns spatial units. Later, the concept of time is formed during the stages of cognitive development. Subsequently, it is integrated into the speech system through grammatical means.

V. CONCLUSIONS. Psycholinguistic analyses have shown that although the process of assimilating time in a child's thinking has universal aspects, it is closely tied to the specifics of the language system. In the Uzbek language, the category of time is expressed through lexical and morphological means. In children's speech, lexical units are actively used first, followed by grammatical tense markers. The process of developing the concept of time in children requires specific methodological approaches in educational curricula.

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