

**RESEARCH ARTICLE**

# Internal Speech Disorders In Children With Motor Alalia And Their Impact On Connected Speech

**Otabek Bozorov**

Head of the Department of Logopedia, National Pedagogical University of Uzbekistan

**Shakhnoza Toreniyazova**

Master's student at the National Pedagogical University of Uzbekistan

**VOLUME:** Vol.06 Issue05 2026

**PAGE:** 106-111

Copyright © 2026 European International Journal of Pedagogics, this is an open-access article distributed under the terms of the Creative Commons Attribution-Noncommercial-Share Alike 4.0 International License. Licensed under Creative Commons License a Creative Commons Attribution 4.0 International License.

## Abstract

The article analyzes the specific features of the formation of inner speech in children with motor alalia and its impact on the development of connected speech. The study reveals the mechanisms of connected speech disorders based on the cognitive and regulatory functions of inner speech. The authors scientifically substantiate the fact that delays in the development of inner speech directly affect the coherence, logic and grammatical completeness of connected speech. This article examines the peculiarities of inner speech development in preschool children with motor alalia and its influence on the formation of connected speech. The study is based on psycholinguistic and neuropsychological approaches that consider inner speech as a regulatory mechanism of speech activity. The authors analyze the relationship between speech programming, self-control, cognitive regulation, and the coherence of oral speech. Comparative research conducted with children aged 5–6 years demonstrated that insufficient development of inner speech negatively affects sentence planning, logical consistency, grammatical organization, and narrative coherence. The findings confirm that deficits in inner speech mechanisms are one of the leading factors underlying connected speech disorders in children with motor alalia. The article emphasizes the importance of incorporating methods aimed at developing inner speech into speech therapy intervention programs in order to improve communicative competence and coherent speech production.

## KEY WORDS

Motor alalia, inner speech, connected speech, cognitive processes, ontogenetic development of speech.

## INTRODUCTION

In modern speech therapy, the study of speech disorders requires the analysis not only of the forms of manifestation of external speech, but also of its internal mechanisms. In particular, in the case of motor alalia, speech disorders are determined by complex psycholinguistic and

neuropsychological factors. In children with motor alalia, insufficient development of connected speech is often observed. This is due not only to the lack of grammatical means, but also to the violation of the internal programming system of speech. In this regard, the study of the level of formation of internal speech is an urgent scientific problem.

The development of speech in early childhood is closely connected with the maturation of cognitive, psychological, and neurophysiological processes. One of the most important components of speech activity is inner speech, which serves as the basis for planning, organizing, and regulating verbal expression. In children with typical speech development, inner speech gradually becomes an essential mechanism for constructing coherent utterances and controlling communicative behavior. However, in children with motor alalia, this process is significantly impaired due to insufficient formation of the central speech mechanisms. Motor alalia is characterized not only by difficulties in expressive speech but also by disturbances in higher mental functions related to language processing. These disturbances often affect the child's ability to organize thoughts, maintain logical consistency, and construct grammatically complete statements. As a result, connected speech becomes fragmented, situational, and poorly structured. Modern speech therapy increasingly recognizes the importance of studying the internal mechanisms of speech disorders in order to improve diagnostic and corrective approaches. The relevance of this study is determined by the growing need for scientifically grounded methods aimed at developing inner speech as a prerequisite for the formation of coherent speech. Investigating the relationship between inner speech and connected speech in children with motor alalia contributes to a deeper understanding of speech ontogenesis and allows specialists to design more effective speech therapy interventions.

### Literature review

The problem of inner speech has been widely studied in psychology, psycholinguistics, and speech therapy, where it is considered one of the central mechanisms of speech activity and thinking. The theoretical foundations of the concept of inner speech were first developed by Lev Vygotsky, who interpreted inner speech as a product of the internalization of external speech and a psychological tool that regulates intellectual activity, behavior, and communication. According to the scientist, the development of speech passes through several ontogenetic stages: social speech, egocentric speech, and finally inner speech. Vygotsky emphasized that inner speech differs significantly from external speech because it is abbreviated, predicative, situational, and closely connected with thinking processes [1, pp. 244–248]. The scientist also noted that inner speech serves as a mechanism for preliminary

planning and semantic organization of utterances, which later become expressed in external speech.

The neuropsychological mechanisms of speech activity were further developed in the works of Alexander Luria, who studied the functional organization of speech in the brain. Luria connected speech programming and regulation with the activity of the frontal regions of the cerebral cortex and demonstrated that disturbances in these areas lead to impairments in the planning, sequencing, and control of speech production [2, pp. 118–126]. According to his theory, inner speech performs a regulatory role and ensures the transition from thought to verbal expression. The scientist considered speech activity as a complex functional system in which cognitive operations, memory, and self-regulation interact closely. These ideas are particularly important in understanding speech disorders in children with motor alalia, where difficulties in speech planning are accompanied by insufficient development of inner speech mechanisms.

Research devoted to motor alalia indicates that this disorder is characterized not only by expressive speech deficits but also by impairments in higher psycholinguistic processes. E. F. Arkhipova notes that children with alalia demonstrate insufficient development of verbal means, limited vocabulary, poor grammatical structuring, and difficulties in organizing coherent utterances [3, pp. 58–60]. The author emphasizes that the inability to consistently formulate thoughts is associated with the immaturity of internal speech regulation and the weak development of verbal-logical thinking. In such children, speech production often becomes impulsive, fragmented, and poorly organized, which negatively affects communication and learning processes.

A significant contribution to the study of the psychological and pedagogical characteristics of children with alalia was also made by E. P. Gutnik, who analyzed the relationship between speech underdevelopment and cognitive dysfunctions. According to the researcher, children with motor alalia experience serious difficulties in planning utterances, maintaining semantic coherence, and constructing grammatically complete sentences [4, pp. 113–116]. The author explains these manifestations by insufficient development of internal programming mechanisms and instability of attention and memory processes. As a result, the transition from internal speech planning to external verbal realization becomes disrupted.

The issue of connected speech development in children with

speech disorders has also been reflected in the works of E. V. Andreeva and S. N. Arkhipova. The researchers define connected speech as a complex form of speech activity that requires logical organization, grammatical correctness, semantic integrity, and sequential presentation of thoughts [5, pp. 28–30]. According to their findings, children with general speech underdevelopment and motor alalia often demonstrate fragmented narration, omission of semantic links, poor sentence expansion, and simplified grammatical constructions. The authors stress that successful formation of connected speech depends on the level of development of internal speech mechanisms, which provide preliminary planning and organization of verbal expression.

Modern psycholinguistic studies confirm that inner speech performs several important functions in speech activity, including speech planning, self-control, regulation of cognitive operations, and support of working memory. Researchers emphasize that inner speech acts as an intermediate stage between thought and spoken utterance, ensuring the coherence and semantic completeness of speech production. Therefore, insufficient development of inner speech inevitably affects the quality of connected speech, especially in children with motor alalia, whose speech activity is characterized by deficits in programming, regulation, and verbal organization.

### **Research methodology**

The study was organized on the basis of a comparative approach. It involved 15 children with motor alalia aged 5–6 years (experimental group) and 15 children with normal speech development as a control group.

The hearing, vision and general intelligence of the children participating in the study were taken into account.

The methods of observation, experimental-speech therapy tasks, speech analysis and comparative analysis were used in the study:

Since inner speech is not directly observed, it was assessed using indirect indicators and the following diagnostic methods were used:

#### **1. Assessment of inner speech:**

- preliminary planning when composing a story based on a picture
- organization of thought through a delayed response
- identification of working memory through internal repetition

- we used methods of self-control of speech.

The presence of pauses, sentence structure and speech control were taken into account in the assessment.

#### **2. When assessing connected speech, we used the following methods:**

- composing a story based on a series of pictures
- retelling the text
- free narrative.

When assessing connected speech, the criteria of consistency, logical connection, and grammatical completeness were followed.

The results were evaluated on a 3-point scale:

- 0 - unformed
- 1 - partially formed
- 2 - fully formed

### **Research Results**

The analysis of the obtained data demonstrated a stable and direct relationship between the level of inner speech development and the quality of connected speech in preschool children with motor alalia. During the assessment process, significant differences were identified between the experimental group and the control group in all diagnostic indicators related to speech planning, logical organization of utterances, and grammatical coherence.

The results of tasks aimed at evaluating the formation of inner speech showed that the majority of children with motor alalia experienced serious difficulties in preliminary speech programming. In 73% of the children in the experimental group, pre-planning of utterances was practically absent. These children began speaking impulsively without preliminary organization of thoughts, which resulted in chaotic and fragmented statements. Their speech was often interrupted by long pauses, repetitions, abrupt topic changes, and unfinished sentences. In 20% of the children, elements of speech planning were partially preserved, although they still demonstrated instability in maintaining the sequence of thoughts and semantic coherence. Only 7% of the children with motor alalia showed relatively preserved mechanisms of inner speech regulation and were able to organize speech activity with partial support from the examiner.

In contrast, the children in the control group demonstrated significantly higher indicators of inner speech formation. Most children with normal speech development were able to plan their statements internally before verbal expression, maintain the sequence of ideas, and demonstrate self-control during narrative tasks. Their responses were characterized by shorter pauses, stable grammatical structures, and logical completeness.

The study of connected speech also revealed substantial differences between the groups. In the experimental group, 68% of children demonstrated fragmented connected speech. Their narratives lacked consistency, semantic integrity, and logical transitions between events. Children frequently omitted important parts of the story, violated chronological order, and used grammatically simplified sentence constructions. In many cases, the narratives consisted of isolated words or short syntactic structures that did not form a coherent text.

Only 10% of children with motor alalia were able to construct a relatively coherent narrative. However, even in these cases, speech production remained limited in lexical diversity and grammatical complexity. The children required additional prompting, visual support, or repeated instructions to maintain the storyline and complete the task successfully.

The control group showed considerably better performance in all indicators of connected speech development. Most children were able to compose logically structured stories based on picture sequences, preserve causal and temporal relationships, and use grammatically complete sentences. Their speech demonstrated semantic coherence, consistency, and a higher level of narrative organization.

Particular attention was paid to the relationship between pauses, self-correction, and logical organization of speech. Children with insufficiently developed inner speech demonstrated unstable speech regulation characterized by frequent interruptions, difficulties in selecting lexical units, impaired sentence construction, and reduced ability to monitor their own utterances. In addition, limitations in verbal-logical thinking negatively affected the ability to establish causal relationships and organize events sequentially.

At the same time, children with relatively developed inner speech indicators demonstrated higher levels of connected speech formation. Their narratives were more organized, grammatically developed, and semantically complete. These findings confirm that the degree of inner speech formation

directly influences the effectiveness of connected speech production in children with motor alalia.

The comparative analysis of experimental results therefore indicates that disturbances in inner speech mechanisms significantly complicate the processes of speech programming, regulation, and coherent verbal expression. The obtained data support the idea that inner speech serves as an important psycholinguistic basis for the formation of connected speech and plays a key role in the development of communicative competence in preschool children.

### Discussion

The results of the study confirm the important regulatory role of inner speech in the formation and functioning of connected speech in preschool children with motor alalia. The obtained data demonstrated that insufficient development of inner speech mechanisms negatively affects the processes of speech programming, semantic organization, grammatical structuring, and control of verbal expression. The identified difficulties in constructing coherent utterances indicate that speech disorders in motor alalia are not limited only to defects in pronunciation or vocabulary but are also associated with deeper psycholinguistic and neuropsychological mechanisms.

The study showed that children with poorly developed inner speech experienced significant difficulties in preliminary planning of utterances. Their speech production was often impulsive, situational, and fragmented. In many cases, children were unable to maintain the sequence of thoughts, establish logical connections between events, or complete grammatically organized statements. Frequent pauses, repetitions, abrupt interruptions, and instability of narrative structure reflected insufficient internal regulation of speech activity. These manifestations indicate that inner speech acts as a mediating mechanism between thought and external speech production.

The obtained findings are consistent with the theoretical views of Lev Vygotsky, who considered inner speech to be a product of the internalization of external communicative speech. According to Vygotsky's theory, inner speech gradually develops into a psychological tool that regulates thinking, planning, and self-control. The results of the present study support this concept by demonstrating that children with insufficiently formed inner speech mechanisms encounter serious difficulties in organizing coherent verbal expression. The inability to internally structure future utterances leads to

disturbances in external speech coherence and grammatical completeness.

The findings also correspond with the neuropsychological theory of Alexander Luria, who emphasized the role of frontal brain regions in speech programming and regulation. The observed difficulties in speech planning, maintaining narrative sequence, and controlling verbal responses in children with motor alalia may indicate insufficient functional maturity of the neural systems responsible for regulatory activity. The instability of speech behavior identified during the experimental tasks confirms the close relationship between cognitive regulation and speech organization.

An important aspect of the discussion concerns the relationship between inner speech and higher cognitive processes. The study demonstrated that children with motor alalia often showed reduced verbal-logical thinking, limited working memory, and weak self-monitoring abilities. These deficits negatively influenced their capacity to maintain semantic integrity and causal relationships within narratives. Since inner speech performs the functions of internal rehearsal, planning, and cognitive regulation, its insufficient formation significantly complicates the development of coherent speech activity.

The comparative analysis between the experimental and control groups revealed that children with normal speech development actively used mechanisms of internal programming before producing speech. Their narratives were characterized by logical consistency, grammatical completeness, and semantic coherence. This contrast further confirms that the quality of connected speech largely depends on the level of development of inner speech mechanisms.

The discussion of the obtained results also has important practical implications for speech therapy intervention. Traditional approaches to correcting motor alalia are often focused primarily on vocabulary expansion and grammatical development. However, the findings of this study indicate that effective speech therapy should also include targeted work on the development of inner speech functions. Special attention should be paid to exercises aimed at speech planning, self-regulation, internal verbal rehearsal, sequential organization of thoughts, and the development of verbal-logical thinking.

In addition, the study highlights the importance of using complex psycholinguistic and neuropsychological approaches in the diagnosis and correction of speech disorders.

Assessment of only external speech manifestations may not fully reveal the mechanisms underlying speech impairment. Therefore, evaluation of inner speech processes can significantly improve the effectiveness of diagnostic procedures and allow specialists to design more individualized corrective programs for children with motor alalia.

Overall, the discussion confirms that inner speech serves as a fundamental mechanism in the organization of connected speech. Disturbances in its formation lead to significant impairments in communicative activity, narrative production, and speech self-regulation. Consequently, the development of inner speech should be regarded as one of the priority directions in modern speech therapy work with preschool children diagnosed with motor alalia.

### Conclusion

This study was aimed at studying the level of formation of inner speech in children with motor alalia and its influence on the development of connected speech. The results obtained confirmed that inner speech is an important regulatory mechanism of speech activity, and its insufficient formation leads to a violation of connected speech.

During the study, it was found that the programming and control functions of inner speech are poorly developed in children with motor alalia. This leads to a limitation of the ability to pre-program speech, a fragmentary structure of sentences, and a violation of logical consistency. At the same time, the existence of a direct relationship between the level of inner speech and the quality of connected speech was proven based on experimental results.

Comparative analysis with the control group showed that children with motor alalia have not only grammatical and lexical deficiencies, but also significant defects in the mechanisms of internal speech organization. This confirms the need to study speech disorders not only in their external manifestations, but also at a deep psycholinguistic level.

In practical terms, the results obtained showed the need to develop and apply special methods aimed at developing inner speech in speech therapy, since the use of special methods aimed at developing inner speech increases the effectiveness of the formation of connected speech.

### REFERENCES

1. Vygotsky, L. S. "Play and its role in the mental development of the child." Collected Works. Moscow:

Pedagogy, 2005; Vol. 4, pp. 244–268. (in Russian)

2. Luria, A. R. Language and Consciousness. Moscow: Moscow State University Press, 1979; 320 p. (in Russian)
3. Arkhipova, E. F. "Children with alalia in kindergarten." Modern preschool education. Theory and practice. 2016; No. 4, pp. 58–63. (in Russian)
4. Gutnik, E. P. "Clinical, psychological, and pedagogical characteristics of children with alalia." — Text: direct. Current issues of modern pedagogy: Proc. of the X Int. scientific conf. (Samara, March 2017). - Samara: OOO "Izdatelstvo ASGARD", 2017. - pp. 113-118. (in Russian)
5. Andreeva E. V., Arkhipova S. N. Development of coherent speech in older preschoolers with general speech underdevelopment [Electronic resource] // Scientific review. Pedagogical sciences. 2019. No. 4. pp. 28-31. (in Russian)