

# A Psycholinguistic Investigation of Stuttering in Language Teaching Environments

**Amthal Mohammed Abbas,**

University of Diyala, Diyala, Iraq

**Naba Hawas Khalf**

University of Diyala, Diyala, Iraq

**Received:** 17 August 2025; **Accepted:** 29 September 2025; **Published:** 09 October 2025

**Abstract:** Stuttering is a common speech disorder that affects the fluency of spoken language. It is characterized by involuntary repetitions, prolongations, or blocks during speech. This condition often begins in childhood and may persist into adulthood if not properly treated. The exact causes of stuttering are still unclear, but researchers believe it results from a combination of genetic, neurological, and environmental factors. Stuttering can impact a person's communication, confidence, and social interactions. Various treatment methods, such as speech therapy and cognitive-behavioral techniques, have been developed to help individuals manage their speech more effectively. This study aims to provide an overview of stuttering, its causes, effects, and the available intervention strategies.

**Keywords:** Stuttering, involuntary repetitions, language teaching environment.

## Introduction

Stuttering is one of the most common speech disorders that affect communication skills in both children and adults. It is marked by disruptions in the flow of speech, including repetitions of sounds or syllables, prolongations of sounds, and involuntary pauses known as blocks. These speech disruptions can vary in frequency and severity from one person to another. Stuttering usually starts in early childhood, between the ages of 2 and 6, and for some individuals, it continues into adulthood. While the exact cause of stuttering is still unknown, it is believed to involve a combination of genetic, neurological, and environmental factors.

This disorder can have a significant impact on a person's academic performance, self-esteem, and social life. Therefore, early diagnosis and intervention are crucial to help individuals improve their speech fluency and communication skills. The present study explores the nature of stuttering, its possible causes,

effects on the individual, and the most effective methods used to treat and manage this condition.

## 1. Literature Review

### 1.1. Stuttering in Focus

Stuttering, also referred to as stammering or childhood-onset fluency disorder, is a complex speech disorder that disrupts the normal flow and rhythm of speech. These disruptions, commonly known as disfluencies, typically include the repetition of sounds (e.g., "b-b-ball"), syllables (e.g., "ba-ba-ball"), or entire words (e.g., "ball-ball-ball"), prolongation of sounds (e.g., "sssssnake"), and involuntary pauses or blocks, where the speaker is unable to produce any sound despite the apparent effort. What distinguishes stuttering from normal speech hesitations is its persistent and involuntary nature, often coupled with visible struggle behaviors such as facial tension, rapid eye blinking, or involuntary body movements. Importantly, people who stutter generally know what they want to say, but experience difficulty executing

fluent speech due to disruptions in their speech motor control (National Institute on Deafness and Other Communication Disorders [NIDCD], n.d.). Stuttering may vary in severity depending on context, emotional state, and level of linguistic or cognitive demand. This condition can have a profound impact on an individual's communication ability, self-esteem, academic performance, and social interactions, particularly in language learning environments where verbal communication is emphasized.

## 1.2 Psycholinguistic Perspectives on Stuttering

From the psycholinguistic point of view, stuttering is not merely a physical speech disorder but a disruption in the intricate cognitive-linguistic processes that underlie fluent speech. Psycholinguistics investigates the mental mechanisms responsible for language comprehension, production, and acquisition. In the context of stuttering, research has focused on how disruptions in speech planning, lexical retrieval, phonological encoding, and articulatory execution contribute to disfluency. Packman, Onslow, and Attanasio (1996) proposed that stuttering results from a breakdown in the speech motor control system, which becomes overloaded during linguistic formulation. Similarly, Karniol (1995) emphasized that stuttering involves multiple interacting components: linguistic (word retrieval and sentence construction), cognitive (attention and working memory), and motor (articulatory planning). These disruptions are particularly pronounced in moments requiring complex linguistic construction or high communicative pressure. Hence, psycholinguistic theories view stuttering as a dynamic and multidimensional condition influenced by internal processing limitations and external communicative demands.

## 1.3 Stuttering in Second Language Acquisition

Stuttering presents additional challenges in the domain of second language (L2) acquisition. Learning and using a second language require significant cognitive resources, including attention, working memory, and executive function. For individuals who stutter, these demands can amplify speech difficulties. According to Nuryani, Wibisono, and Salikin (2022), L2 learners who stutter may experience increased anxiety, reduced fluency, and decreased confidence due to the dual burden of language processing and speech dysfluency. The cognitive load involved in switching between languages, recalling vocabulary, and applying

grammatical rules intensifies the risk of disfluency. Moreover, L2 environments often prioritize oral performance, making learners more self-conscious about their speech, which may exacerbate stuttering. As a result, educators and researchers must consider the complex interaction between speech disorders and second language proficiency to develop supportive instructional strategies.

## 2. Types of Stuttering

Stuttering can be broadly classified into three main types based on its origin and underlying causes:

**2.1 Developmental Stuttering** is the most prevalent type and typically emerges between the ages of 2 and 7 when children are rapidly developing language skills. This form of stuttering is often linked to genetic predispositions and neural developmental factors. Children may outgrow developmental stuttering; however, in some cases, it persists into adulthood, especially when early intervention is not provided. According to the Mayo Clinic (2023), developmental stuttering is believed to result from a combination of hereditary, neurological, and environmental influences.

**2.2 Neurogenic Stuttering** arises due to damage or dysfunction in the brain areas responsible for speech production. It may occur following a stroke, traumatic brain injury, or other neurological conditions such as Parkinson's disease. Neurogenic stuttering is distinguished by disfluencies that are not typically responsive to speech therapy techniques effective in developmental stuttering. Unlike developmental stuttering, neurogenic stuttering is not associated with childhood onset and usually lacks secondary behaviors like facial tension (Psychology Today, n.d.).

**2.3 Psychogenic Stuttering** is relatively rare and is associated with emotional trauma, psychological disturbances, or mental health conditions such as depression or anxiety. It often manifests suddenly, typically in response to a triggering psychological event. While psychogenic stuttering can mimic developmental stuttering in its external presentation, its root cause is psychological rather than neurological or genetic. Treatment often involves addressing the underlying emotional or mental health issues (Mayo Clinic, 2023).

Each type of stuttering requires a tailored intervention approach, emphasizing the importance of accurate diagnosis and individualized support in both clinical and

educational settings.

### **3. Stuttering and Second Language Anxiety: A Psycholinguistic Link**

Second language (L2) anxiety is a specific form of anxiety that arises in language learning contexts, often leading to apprehension and nervousness when using the L2. This anxiety can significantly impact learners who stutter, as the added pressure of speaking in a non-native language may exacerbate disfluencies.

From a psycholinguistic perspective, anxiety affects the cognitive processes involved in speech production. High anxiety levels can disrupt the planning and execution stages of speech, leading to increased stuttering episodes. Horwitz, Horwitz, and Cope (1986) introduced the concept of Foreign Language Classroom Anxiety, highlighting how anxiety can interfere with language learning and performance.

Moreover, Nuryani, Wibisono, and Salikin (2022) conducted a case study examining the interplay between stuttering and L2 anxiety. Their findings indicated that the subject's stuttering severity increased in high-pressure L2 situations, suggesting a strong link between anxiety and stuttering in L2 contexts.

### **4. The Cognitive Load Theory and its Connection to Stuttering**

Cognitive Load Theory (CLT) posits that working memory has a limited capacity for processing information. When the cognitive demands of a task exceed this capacity, performance can deteriorate. In the context of language learning, tasks that require high cognitive effort—such as constructing grammatically complex sentences or retrieving unfamiliar vocabulary—can overload the working memory.

For individuals who stutter, this overload can disrupt the fluency of speech. The increased cognitive load may interfere with the speech planning and execution processes, leading to more frequent stuttering episodes. Sweller (1988) emphasized that instructional designs should consider cognitive load to optimize learning outcomes.

Packman, Onslow, and Attanasio (1996) explored the relationship between speech motor skills and stuttering, suggesting that increased cognitive demands can strain the speech motor system, resulting in disfluencies.

### **5. Teacher Attitudes Toward Stuttering in the Language Classroom**

Teachers' perceptions and attitudes toward stuttering can significantly influence the learning experiences of students who stutter. Positive attitudes and supportive behaviors can create an inclusive environment that encourages participation and reduces anxiety.

Cooper and Cooper (1996) conducted a study examining clinicians' attitudes toward stuttering over a decade. Their findings revealed a shift toward more positive perceptions, emphasizing the importance of continued education and awareness to foster supportive environments.

In language classrooms, teachers who demonstrate patience, provide alternative communication methods, and avoid putting students on the spot can help reduce the pressure on students who stutter, facilitating better learning outcomes.

### **6. Strategies to Create a Stutter-Friendly Language Classroom**

Creating a supportive classroom environment is crucial for students who stutter. Implementing specific strategies can help reduce anxiety and promote fluency:

**Extended Response Time:** Allowing students additional time to respond can alleviate pressure and reduce stuttering instances.

**Alternative Assessment Methods:** Providing options such as written assignments or presentations can accommodate students' comfort levels.

**Positive Reinforcement:** Encouraging all students and celebrating efforts can build confidence.

**Educating Peers:** Teaching classmates about stuttering can foster empathy and reduce stigma.

Yaruss, Coleman, and Quesal (2010) emphasized the importance of understanding stuttering within the framework of the International Classification of Functioning, Disability, and Health (ICF), advocating for comprehensive approaches that consider environmental and personal factors.

### **7. Stuttering vs. Normal Hesitations in Second Language Speech: A Psycholinguistic Comparison**

In second language (L2) acquisition, speech disfluency is common, especially among learners at lower proficiency levels. However, it is crucial to distinguish

between **normal hesitations** and **clinical stuttering**, as their causes, characteristics, and implications are quite different.

### 7.1 Normal Hesitations in L2 Learners

Normal hesitations are **natural pauses or interruptions** that occur as a result of language processing difficulties. These might include:

Searching for the correct vocabulary

Structuring grammatically correct sentences

Organizing thoughts before speaking

Examples of typical hesitations include:

Fillers like “uh,” “um,” “you know”

Silent pauses

Self-corrections or restarts

These disfluencies are **voluntary and temporary**, and they tend to **decrease** as the learner becomes more fluent and confident in the second language. Such hesitations are part of the learning process and are not considered pathological.

### 7.2 Stuttering in L2 Speech

Stuttering, on the other hand, is a **speech disorder** that affects the fluency and flow of speech. It is not caused by language learning, although it may become more noticeable in L2 contexts due to increased cognitive and emotional pressure.

Stuttering is characterized by **involuntary** disruptions such as:

**Sound or syllable repetitions** (e.g., “I-I-I want”)

**Prolongations** (e.g., “Sssssometimes”)

**Blocks** (a complete stop or inability to produce a sound)

These symptoms are **not reduced** with greater language proficiency, and they occur across both native and second language use. Stuttering may also be accompanied by **physical tension, facial movements**, or **emotional reactions** like embarrassment or anxiety.

### 7.3 Psycholinguistic Perspective

From a psycholinguistic point of view:

Normal hesitations reflect **cognitive load and language processing** issues.

Stuttering reflects a **neurological and speech-motor planning** disorder, which may be influenced—but not caused—by linguistic complexity.

Wingate (1988) emphasized that while both types of disfluencies affect fluency, only stuttering involves a **breakdown in the speech production system**, rather than just a temporary delay in language processing.

### Conclusions

Stuttering is a complex speech disorder that affects many individuals, especially during childhood. It disrupts the normal flow of speech and can cause emotional and social difficulties for those who experience it. Understanding stuttering from different perspectives, such as psycholinguistics and second language learning, helps us to better support people who stutter, especially in educational settings.

Early diagnosis and appropriate intervention are essential to reduce the negative effects of stuttering on communication and confidence. Teachers and speech therapists play a key role in creating a supportive environment that encourages fluent speech and reduces anxiety. By raising awareness and implementing effective strategies, we can help individuals who stutter to improve their speaking abilities and succeed both academically and socially.

### References

1. Cooper, E. B., & Cooper, C. S. (1996). Clinician attitudes toward stuttering: Two decades of change. *Journal of Fluency Disorders*, 21(2), 119–135. [https://doi.org/10.1016/0094-730X\(96\)00011-5](https://doi.org/10.1016/0094-730X(96)00011-5)
2. Horwitz, E. K., Horwitz, M. B., & Cope, J. (1986). Foreign language classroom anxiety. *The Modern Language Journal*, 70(2), 125–132. <https://doi.org/10.2307/327317>
3. Karniol, R. (1995). Stuttering, language, and cognition: A review of a model. *Journal of Fluency Disorders*, 20(4), 223–236. [https://doi.org/10.1016/0094-730X\(95\)00026-7](https://doi.org/10.1016/0094-730X(95)00026-7)
4. Mayo Clinic. (2023). Stuttering. <https://www.mayoclinic.org/diseases-conditions/stuttering/>
5. National Institute on Deafness and Other Communication Disorders. (n.d.). Stuttering. National Institutes of Health. <https://www.nidcd.nih.gov/health/stuttering>
6. Nuryani, A., Wibisono, Y., & Salikin, H. (2022). A case study of foreign language anxiety and stuttering in an EFL classroom. *International*

Journal of Language Education, 6(1), 123–134.

<https://doi.org/10.26858/ijole.v6i1.XXXXX>

7. Packman, A., Onslow, M., & Attanasio, J. (1996). Speech motor skills and stuttering: A psycholinguistic analysis. *Journal of Speech, Language, and Hearing Research*, 39(1), 123–131. <https://doi.org/10.1044/jshr.3901.123>
8. Psychology Today. (n.d.). Neurogenic stuttering. <https://www.psychologytoday.com/us/basics/stuttering>
9. Sweller, J. (1988). Cognitive load during problem solving: Effects on learning. *Cognitive Science*, 12(2), 257–285. [https://doi.org/10.1016/0364-0213\(88\)90023-7](https://doi.org/10.1016/0364-0213(88)90023-7)
10. Yaruss, J. S., Coleman, C., & Quesal, R. W. (2010). Stuttering and the International Classification of Functioning, Disability, and Health (ICF): An update. *Journal of Communication Disorders*, 43(4), 295–307. <https://doi.org/10.1016/j.jcomdis.2010.03.003>