

## **FACTORS INFLUENCING SPEECH DELAY IN EARLY CHILDHOOD: A LITERATURE REVIEW BASED ON VYGOTSKY'S THEORY**

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### **ABSTRACT**

Language development is an important aspect in the growth and development of early childhood because it is directly related to thinking skills, social interaction, and learning readiness. One of the disorders that often appears during the golden age (0–6 years) is speech delay, which is a condition when a child is not yet able to use spoken language according to his developmental stage. This article aims to identify and analyze factors that influence speech delay in early childhood based on Vygotsky's social development theory. The study was conducted using the Systematic Literature Review (SLR) method of national and international scientific articles published between January 2019 and December 2025. Of the 245 articles found through four databases, 25 articles met the inclusion criteria and were analyzed thematically. The results of the study indicate that speech delay is influenced by internal factors of the child (cognitive and emotional), family factors (parenting patterns and verbal stimulation), educational environmental factors (the role of teachers and learning methods), and socio-technological factors (social interaction and exposure to digital devices). Based on Vygotsky's theory, social interaction through the Zone of Proximal Development (ZPD) and scaffolding plays a central role in accelerating children's language development.

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## **INTRODUCTION**

The ability to speak is one of the main characteristics that distinguish humans from other creatures. Since childhood, language functions not only as a communication tool, but also as a means of thinking, understanding the world, and expressing emotions. In the context of early childhood education, language development has a strategic role in shaping children's social, emotional, and cognitive abilities (Wahyudi et al., 2024). Through language, children learn to recognize themselves, interact with others, and develop early concepts about the surrounding environment.

In recent years, the phenomenon of speech delay in early childhood has become a major concern in the world of education and developmental psychology (Palipung et al., 2024). Around 5–15% of preschool children worldwide experience significant speech delay, and most

cases are not caused by medical factors, but by minimal environmental stimulation and limited social interaction (Chonchaiya & Pruksananonda, 2008). Speech delay is defined as a condition where a child is unable to use spoken language according to their developmental stage, even though their cognitive and hearing abilities are classified as normal (Yuniari, 2023). If not treated early, speech delay can impact early literacy skills, social adjustment, and even emotional development (Herawati & Harsiwi, 2025).

Although a number of studies have partially examined the causal factors of speech delay, studies that comprehensively integrate the latest findings (2019–2025) with Vygotsky's sociocultural theoretical framework are still very limited. This gap encourages the need for a systematic literature review that not only maps risk factors but also interprets them from the perspective of social interaction as the main mechanism of language development.

From a developmental psychology perspective, Vygotsky's (1978) theory explains that language develops through social interactions between children and adults or more competent peers within the Zone of Proximal Development (ZPD). Irshad et al. (2021) emphasized that the ZPD is an effective evaluative tool for measuring children's language and social development in early childhood education. Thus, speech delays not only indicate linguistic impairments but also weak social interactions and learning environment support. This literature review aims to: (1) map the factors that contribute to speech delay based on recent research (2019–2025); (2) examine the relevance of Vygotsky's theory in explaining early childhood language development; and (3) formulate recommendations for teachers, parents, and early childhood education institutions.

## RESEARCH METHODS

This study used a Systematic Literature Review (SLR) approach, a scientific study method conducted in a structured and systematic manner to identify, assess, and synthesize relevant previous research findings (Snyder, 2019). This approach was chosen because it aligns with the research objective of comprehensively reviewing the phenomenon of speech delay based on Vygotsky's theory.

The literature search was conducted through four major academic databases: Scopus, ERIC (Education Resources Information Center), Directory of Open Access Journals (DOAJ), and Google Scholar. The search timeframe was limited to January 2019 and December 2025, with the exception of classic works that serve as theoretical foundations, such as Vygotsky (1978) and several seminal empirical studies that are irreplaceable by recent literature, namely Chonchaiya and Pruksananonda (2008) on television exposure, Bishop and Snowling (2004) on specific language disorders, and Connor et al. (2006) on preschool instruction and early literacy. These exclusions were explicitly listed following common practice in SLRs when classic sources have irreplaceable methodological relevance.

The keywords used include: "speech delay", "language development", "early childhood education", "parenting style", "sociocultural theory", "Vygotsky", "scaffolding", and "Zone of Proximal Development", combined with the Boolean operators AND, OR, and NOT. The article selection process follows the PRISMA 2020 guidelines (Page et al., 2021) through four stages: identification, screening, feasibility testing, and final inclusion. Of the total 245 identified articles, after eliminating duplications, 210 articles remained, title and abstract screening resulted in 95 articles, then full-text feasibility testing resulted in 42 articles being fully assessed, so that **25** articles were determined as the final analysis corpus.

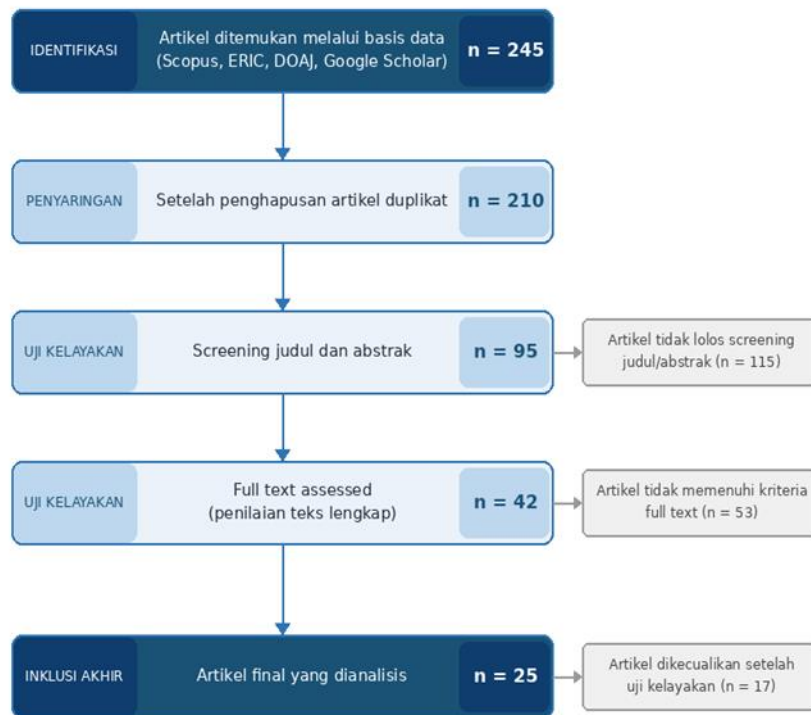


Figure 1. Article Selection Flowchart (PRISMA 2020)

Inclusion criteria included : peer -reviewed empirical articles published between January 2019 and December 2025 ( with the exceptions mentioned above ), written in English or Indonesian, focused on speech delay or language development in children aged 0–6 years , and clearly stating the research design . Exclusion criteria included articles discussing speech disorders due to neurological disorders or autism ( ASD), articles without empirical data , and duplicate articles . Data analysis was conducted using a thematic analysis approach as recommended by Braun and Clarke (2021), by grouping findings into four categories : internal factors , family factors , educational factors , and socio- technological factors .

**RESULTS AND DISCUSSION**

Table 1. Synthesis of Literature Findings Based on Factor Categories

<b>Factor Categories</b>	<b>Main Sub-Factors</b>	<b>Main Source</b>	<b>Vygotsky's Connection</b>
Internal Child	Cognitive development , emotional regulation , communication motivation , passive digital exposure	Yang et al. (2021); Madigan et al. (2019)	ZPD support overcomes emotional barriers
Family	Democratic parenting , verbal stimulation , screen time , two - way communication	Santrrock (2022); Daniels (2016)	Family as the first ZPD and primary scaffolder
Educational Environment	Teacher verbal scaffolding, dialogic teaching, teacher- child ratio , early detection	Veraksa et al. (2021); Connor et al. (2006)	Teachers as scaffolding mediators in ZPD

Socio-Technology	Peer interaction , individualistic environment , screen time , mediated digital media	Madigan et al. (2019); Suhartono (2024)	Cultural tools are effective when they mediate meaningful social interactions .
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### Internal Factors of Children

Internal factors encompass aspects originating from within the child , particularly cognitive , emotional , and motivational development . Within Vygotsky's (1978) theoretical framework , a child's internal capacity is not an absolute limit , but rather a starting point that can be expanded through meaningful social interactions within the Zone of Proximal Development (ZPD). Children with good linguistic processing capacity will more easily absorb and produce language if they receive sufficient verbal stimulation from competent adults (Paul & Norbury, 2020). Bishop and Snowling ( 2004), whose original research focused on Specific Language Impairment (SLI) and neurobiologically based developmental dyslexia, are cited here only to capture the concept of linguistic information processing , not to confirm that the sample discussed in this SLR has a congenital clinical disorder . Conversely , children with emotional challenges such as high anxiety or low communication confidence essentially experience a narrowing of their own ZPD : their language potential cannot be activated because they are not motivated to enter the verbal interaction space ( Yang et al., 2021) .

Veraksa et al . (2021) emphasized that a social interaction- based approach involving gradual adult guidance has proven effective in promoting children's language development , including those with emotional challenges, because appropriate scaffolding helps children transcend their current abilities . Furthermore , children who are passively exposed to too many digital devices lose the opportunity to experience joint attention and dialogic communication—two key prerequisites for activating the ZPD— thus decreasing communication motivation and hindering speech development (Madigan et al., 2019).

### Family Factors

The family is the primary environment in the development of a child's language skills . From Vygotsky's (1978) perspective , the family is the first ZPD a child encounters , a space where parents act as primary scaffolders , helping children internalize language through gradual verbal guidance . Every daily conversation between parents and children , whether in the form of responses to baby babbling , expanding the child's sentences , or sharing reading sessions , is a concrete form of ZPD activation that moves the child from their actual abilities to their potential abilities . Conversely , when verbal interaction is replaced by passive screen exposure without adult mediation , the child's ZPD becomes deactivated . This explains the findings of Chonchaiya and Pruksananonda (2008) in Thailand, that children who are exposed to more television screens without parental interaction have a higher risk of experiencing language delays . Similar results are confirmed by Madigan et al. (2019) who found a negative relationship between increased screen time and early childhood language ability scores in Canada.

Another equally important factor is parenting style . Children raised with a democratic parenting style , where parents provide opportunities for children to express opinions and provide positive feedback, tend to have faster language development (Santrock, 2022). From Vygotsky 's (1978) perspective , the family functions as the first zone of proximal development (ZPD), where

parents act as primary scaffolders, helping children internalize language through gradual verbal guidance. Daniels (2016), in his study of Vygotsky's theory, emphasized that the scaffolding process within the family is the foundation for children's verbal thinking abilities later in life.

### **Educational Environmental Factors**

Early childhood education institutions serve as the second social space after the family, and within Vygotsky's (1978) framework, teachers function as scaffolding mediators who guide children from their zone of actual ability to their potential abilities through structured verbal interactions. This means that the quality of the teacher's speech to children, whether responsive, dialogic, and expanding the child's abilities, or conversely instructive and one-way, directly determines the extent of the child's ZPD. Veraksa et al. (2021) found that a sociocultural dialogue approach in early childhood education significantly improves children's narrative and syntactic abilities. Teachers who consistently implement verbal scaffolding strategies such as expanding children's sentences or asking open-ended questions can help children at risk of speech delay catch up on their language development.

Conversely, teaching methods that are too academically oriented, a high teacher-child ratio, and minimal two-way conversation activities can hinder children's communication development (Suhartono, 2024). The application of a dialogic teaching approach and play-based activities such as storytelling and role-play have been shown to be effective in improving early childhood language skills (Yang et al., 2021). Teacher competence in recognizing early signs of speech delay is also a critical factor, as appropriate early intervention can prevent long-term impacts on children's cognitive and social development (Connor et al., 2006).

### **Social and Technological Factors**

In Vygotsky's (1978) theory, language does not develop in the child's head individually, but rather between the child and others in a social interaction space. Therefore, a social environment rich in verbal interaction is an absolute prerequisite for the opening of the ZPD and minimal interaction is the main cause of the ZPD not being activated. Children who rarely play with peers or live in individualistic social environments are at risk of experiencing speech delays because they do not get enough opportunities to practice speaking skills contextually (Suhartono, 2024). A study by Veraksa et al. (2021) in a European preschool environment showed that social interaction between children in an open learning environment can significantly increase speech fluency, clear evidence that peers can also play a role as effective ZPD partners.

The advancement of digital technology presents its own challenges. Madigan et al. (2019) found that increased screen time in children under five years of age was negatively associated with expressive and receptive language scores. Chonchaiya and Pruksananonda (2008) also previously demonstrated that excessive television exposure in children aged 15–48 months was strongly associated with speech delays. However, when technology is used interactively and mediated by adults, it can be an educational tool that enriches children's language experiences. Vygotsky (1978) emphasized that cultural tools, including digital media, are only effective when mediated by meaningful social interactions.

### **Synthesis of Findings : Vygotsky's Theory Perspective**

The results of this study indicate that speech delay in early childhood is a multidimensional phenomenon that cannot be explained by a single factor . The four factors found are internal , family , education , and socio-technological , interacting and rooted in the same core : the quality of social interactions received by children from an early age . Within the theoretical framework of Vygotsky (1978), language development is a social process mediated by interactions between children and adults through the ZPD and scaffolding. When the social environment does not provide sufficient verbal stimuli , children lose the opportunity to practice using language as a thinking tool , resulting in speech delays (Daniels, 2016; Veraksa et al., 2021; Yang et al., 2021).

### **CONCLUSION**

This literature review confirms that speech delay in early childhood is the result of a complex interaction between the child's internal factors , family environment , education , and socio-technological context . All of these factors center on the quality of social interactions received by the child . Based on Vygotsky's theory (1978), the process of language acquisition occurs in the ZPD through scaffolding from parents , teachers, and the social environment . When this support is inadequate , the process of language interiorization is hampered and symptoms of speech delay appear .

For parents , the practical implications include improving the quality of two -way communication with children through meaningful conversations , reading stories , and limiting unsupervised screen time ( Chonchaiya & Pruksananonda , 2008; Madigan et al., 2019). For early childhood education teachers, it is necessary to implement a dialogic teaching approach , verbal scaffolding, and play- based learning that fosters children's courage to speak (Yang et al., 2021; Connor et al., 2006). For the government and policymakers , a parenting education program integrated with early childhood education is needed , as well as teacher training based on Vygotsky's sociocultural principles .

Further research is recommended in the form of experimental studies to test the effectiveness of the Vygotsky -based collaborative intervention model , longitudinal research to track children's language development over the long term , and the development of teacher and parent training modules that can be applied in various Indonesian socio-cultural contexts .

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