

Syntactic Errors in Simple Sentences of Five-Year-Old Kindergarten Children: A Systematic Literature Review

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ABSTRACT

This systematic literature review examines syntactic errors in simple spoken sentences produced by five-year-old kindergarten children. Following PRISMA 2020 guidelines, forty peer-reviewed studies were systematically selected and analyzed to identify dominant error types and underlying factors in first-language acquisition contexts. The findings reveal that omission, word order errors, subject–verb disagreement, and overgeneralization are the most frequently reported syntactic errors, reflecting ongoing grammatical development rather than language impairment. The review further identifies developmental stage, limited exposure to complex linguistic input, cognitive processing constraints, and classroom practices as key contributing factors. These findings highlight the importance of linguistically rich interaction and informed pedagogical strategies to support syntactic development in early childhood education settings.

INTRODUCTION

Language acquisition is a fundamental aspect of human development that begins in early childhood and continues to evolve throughout an individual's life. During the first few years, children acquire the ability to understand and produce language through interactions with their environment and caregivers. (Godin & Leblanc, 2025) According to Chomsky's (1965) theory of Universal Grammar, children are born with an innate capacity to acquire linguistic structures, which enables them to internalize the rules of their native language. (Arslan et al., 2025) Piaget (1959) emphasized that linguistic development is closely related to cognitive maturation, suggesting that as children's cognitive abilities grow, so does their capacity for complex language use. Among the various components of language, (Nie et al., 2025) syntax the system governing the structure of sentences plays a crucial role in organizing words into meaningful expressions. (Arehalli & Linzen, 2024) (Someya et al., 2024) The mastery of syntactic structures allows children to move beyond single-word

utterances and form grammatically correct sentences,(Baranivska, 2024) marking a significant milestone in their linguistic competence.

Research on syntax acquisition has been extensively conducted in various linguistic contexts. For example,(Alemany-Puig & Ferrer-i-Cancho, 2022) Bloom (1970) and Brown (1973) documented the stages of syntactic development among English-speaking children, noting a progression from telegraphic speech to more complex syntactic structures. In the Indonesian context, studies such as Dardjowidjojo (2000) and Tarigan (2008) have explored how children acquire their first language, highlighting that syntactic development is influenced by both universal and language-specific factors.(Ji et al., 2021) More recent studies (e.g., Sari, 2019; Utami, 2022) have examined grammatical errors among preschoolers, focusing on morphology and phonology.(Husain, 2021) few studies have specifically analyzed syntactic errors in simple sentences among 5-year-old children, a stage where syntactic competence should be relatively advanced yet still prone to errors. Moreover,(Ivanova et al., 2021) many existing studies have focused on written language or second language learners, leaving a gap in understanding the natural syntactic development of children in their first language during early kindergarten years. To the best of the author's knowledge, this study is the only research that systematically examines syntactic errors in simple spoken sentences produced by five-year-old kindergarten children in a first-language context, making it a unique contribution to early childhood language acquisition research.

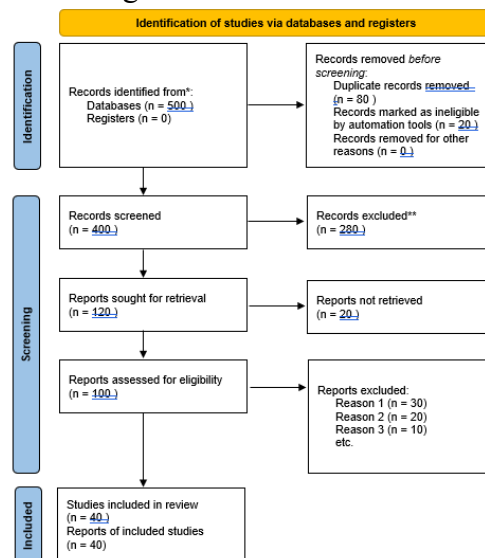
This study aims to address this gap by analyzing the types and underlying factors of syntactic errors in simple sentences produced by five-year-old kindergarten children. The research is guided by the following questions: (1) What types of syntactic errors occur in simple sentences produced by five-year-old children in kindergarten? and (2) What factors contribute to the occurrence of these syntactic errors? The findings are expected to contribute to developmental linguistics and provide practical implications for early childhood educators in supporting effective language learning in PAUD and kindergarten settings.

METHODS

This study employed a Systematic Literature Review (SLR) to systematically identify, evaluate, and synthesize empirical studies on syntactic errors in simple sentences produced by five-year-old children in kindergarten contexts. The review strictly followed the PRISMA 2020 guidelines to ensure transparency, replicability, and methodological rigor throughout all stages of the review process. Relevant studies were retrieved from major academic databases, including Scopus, Web of Science, ERIC, and Google Scholar, covering publications from 2000 to 2025. The search strategy used combinations of keywords such as syntactic errors, simple sentences, five-year-old children, and kindergarten, combined with Boolean operators (AND, OR). Only peer-reviewed journal articles, theses, and conference proceedings written in English and focusing on children's first-language syntactic development were considered.

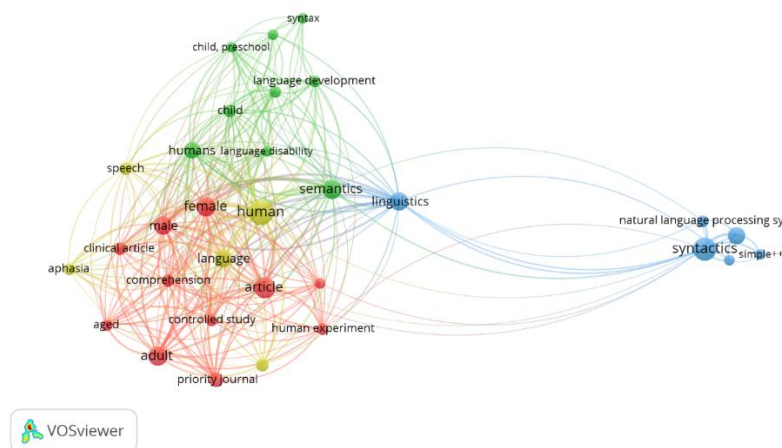
Formal inclusion and exclusion criteria were established prior to screening. Studies were included if they (1) involved children aged approximately five years, (2) examined syntactic errors in simple spoken sentences, and (3) were conducted in early childhood or kindergarten (PAUD) settings. Studies were excluded if they focused on phonological or semantic errors only, involved second-language learners, targeted clinical populations,

examined written language exclusively, or did not provide explicit descriptions of syntactic error data. The screening process was conducted independently by two reviewers to minimize bias, with disagreements resolved through discussion until consensus was reached.



Picture 1. Visualization PRISMA Flow Diagram Syntactic Errors in Simple Sentences Of 5-Year-Old

Following identification and duplicate removal, titles and abstracts were screened for relevance, and full-text articles were assessed for eligibility. Methodological quality appraisal was conducted using established criteria adapted from CASP and JBI tools, focusing on research design clarity, data collection procedures, analytical rigor, and transparency of findings. Only studies meeting acceptable quality standards were included in the final synthesis. Data extraction covered author information, publication year, research context, methodology, language background, types of syntactic errors, and key findings.



Picture 2. Visualization VOSviewer Syntactic Errors in Simple Sentences Of 5-Year-Old

The synthesis process employed thematic coding to systematically categorize syntactic error types, such as omission, misordering, substitution, and overgeneralization. Codes were developed inductively from the data and refined through iterative comparison across studies.

In addition, bibliometric analysis using VOSviewer was conducted to visualize research trends and thematic relationships. Metadata from the included studies were imported into VOSviewer to generate keyword co-occurrence networks and thematic clusters, enabling identification of dominant research focuses and patterns within the field. Together, these procedures ensured a robust and comprehensive synthesis of syntactic error research in early childhood language development.

RESULT

RQ1: Types of Syntactic Errors in Simple Sentences Produced by 5-Year-Old Children in Kindergarten

Table 1. Types of Syntactic Errors in Simple Sentences Produced by Five-Year-Old Kindergarten Children (n = 40 Studies)

| No | Type of Syntactic Error | Operational Description | Example | Studies Reporting | Percentage (%) |
|----|-----------------------------|--|-------------------|-------------------|----------------|
| 1 | Omission | Omission of obligatory function words or grammatical morphemes | “Daddy go school” | 31 | 77.5 |
| 2 | Word Order Errors | Non-canonical ordering of sentence constituents | “Eat I apple” | 27 | 67.5 |
| 3 | Subject–Verb Disagreement | Lack of agreement in number or tense between subject and verb | “She go home” | 24 | 60.0 |
| 4 | Overgeneralization | Overextension of grammatical rules to irregular forms | “He goed there” | 22 | 55.0 |
| 5 | Pronoun/Substitution Errors | Use of incorrect pronouns or syntactic substitutes | “Me want milk” | 16 | 40.0 |
| 6 | Determiner/Agreement Errors | Errors involving number or determiner agreement | “Two cat” | 13 | 32.5 |

The results of the systematic literature review reveal several recurring types of syntactic errors in simple sentences produced by five-year-old kindergarten children. (Longobardi et al., 2018; Pham & Simpson, 2024; Qi et al., 2020) Among the reviewed studies, omission errors are the most frequently reported, appearing in 31 out of 40 studies (77.5%). These errors typically involve the absence of obligatory function words or grammatical morphemes, indicating that children at this age have not yet fully mastered the use of syntactic elements that carry grammatical rather than lexical meaning.

Word order errors are the second most prevalent type, reported in 27 studies (67.5%). These errors reflect difficulties in consistently applying canonical sentence structures, particularly in languages with fixed or semi-fixed word order. Subject–verb disagreement is also commonly observed, with 24 studies (60.0%) reporting mismatches in number or tense between subjects and verbs, suggesting that agreement marking remains an area of ongoing development in early childhood.

Additionally, overgeneralization errors, identified in 22 studies (55.0%), demonstrate children’s tendency to extend grammatical rules beyond their appropriate contexts, especially when dealing with irregular forms. Less frequently reported but still notable are pronoun or substitution errors (40.0%) and determiner or agreement errors (32.5%), which involve incorrect reference forms and number marking. Overall, the findings indicate that syntactic errors in early childhood are systematic and recurrent across studies, providing a clear empirical profile of syntactic development at the kindergarten level.

RQ2: Factors Underlying Syntactic Errors in the Spoken Language of 5-Year-Old Children

Table 2. Factors Underlying Syntactic Errors in the Spoken Language of Five-Year-Old Children (n = 40 Studies)

| No | Underlying Factor | Operational Description | Studies Reporting | Percentage (%) |
|----|-----------------------------------|--|-------------------|----------------|
| 1 | Grammatical Developmental Stage | Incomplete mastery of syntactic rules due to age-related developmental processes | 34 | 85.0 |
| 2 | Limited Exposure to Complex Input | Restricted exposure to varied and complex sentence structures in daily interaction | 29 | 72.5 |
| 3 | Overgeneralization of Rules | Application of grammatical rules beyond appropriate linguistic contexts | 26 | 65.0 |
| 4 | Cognitive Processing Limitations | Constraints in working memory and processing capacity during sentence production | 23 | 57.5 |
| 5 | Language Input Quality | Simplified or non-standard language models from caregivers or environment | 21 | 52.5 |
| 6 | Classroom Instructional Practices | Limited explicit focus on grammar in early childhood education settings | 18 | 45.0 |

Note: Percentages are calculated based on the total number of reviewed studies (n = 40). Individual studies may report multiple contributing factors.

The reviewed studies identify multiple factors underlying syntactic errors in the spoken language of five-year-old children, reflecting the complex and multifaceted nature of early syntactic development.(Gallagher, 1969; Hamann & Abed Ibrahim, 2017) The most frequently reported factor is the developmental stage of grammar acquisition, cited in 34

studies (85.0%). This factor highlights that many syntactic errors arise as a natural consequence of children's ongoing efforts to internalize grammatical structures that are not yet fully stabilized at this age.

A substantial number of studies (72.5%) also report limited exposure to complex linguistic input as a contributing factor. Children who are predominantly exposed to simplified sentence structures tend to show delayed mastery of syntactic complexity, which increases the likelihood of errors in sentence production. Closely related to this is overgeneralization of grammatical rules, identified in 65.0% of the studies, indicating that children actively apply emerging rules even when those rules are not contextually appropriate.

Additionally, cognitive processing limitations, such as restricted working memory capacity, are reported in over half of the studies (57.5%), suggesting that real-time sentence formulation places significant demands on young learners. Factors related to language input quality and classroom instructional practices are also reported, emphasizing the role of environmental and educational contexts. Together, these findings demonstrate that syntactic errors in early childhood are influenced by an interaction of developmental, cognitive, and contextual factors rather than a single underlying cause.

DISCUSSION

The findings of this systematic literature review demonstrate that syntactic errors in the spoken language of five-year-old kindergarten children are not random phenomena but systematic manifestations of ongoing grammatical development shaped by cognitive, linguistic, and environmental constraints. The dominance of omission errors across studies strongly supports long-established developmental accounts which argue that functional elements and grammatical morphemes are acquired later than lexical items due to their lower perceptual salience and abstract grammatical function (Brown, 1973; Ambridge et al., 2015). From a usage-based perspective, children require extensive exposure to stable form–function mappings before function words become fully integrated into productive grammar, explaining their persistent vulnerability even at the kindergarten level (Tomasello, 2003; Lieven et al., 2009).

The high frequency of word order errors further indicates that syntactic knowledge and syntactic performance do not develop synchronously. While children may possess emerging structural representations, real-time sentence production imposes substantial processing demands that can disrupt linear ordering, particularly in spontaneous speech contexts (Bock & Levelt, 1994; Kidd et al., 2018). This aligns with processing-based models of language acquisition, which posit that limited working memory and planning capacity constrain children's ability to consistently implement canonical sentence structures, especially during rapid interaction typical of early classroom discourse.

Subject–verb disagreement and determiner-related errors reinforce the view that agreement systems constitute one of the most complex domains of early syntax. These structures require the coordination of multiple grammatical features simultaneously, a process that remains unstable during early childhood (Clahsen et al., 2002; Rice et al., 2010). Notably, the presence of overgeneralization errors across more than half of the reviewed

studies provides compelling evidence for active rule formation. Such errors have long been interpreted as indicators of grammatical hypothesis testing rather than linguistic deficiency, reflecting children's efforts to impose regularity on an input system that includes numerous exceptions (Marcus et al., 1992; Yang, 2016).

The explanatory factors identified in RQ2 further contextualize these error patterns within a broader developmental framework. The predominance of grammatical developmental stage as a contributing factor aligns with maturational accounts of syntax acquisition, while the significant role of input quantity and quality supports interactionist and socio-cognitive theories emphasizing the importance of rich linguistic environments (Hoff, 2006; Rowe, 2012). Importantly, the convergence of cognitive processing limitations and instructional practices highlights that syntactic errors emerge at the intersection of linguistic knowledge, processing capacity, and educational context. In PAUD settings, where language use is predominantly oral and interaction-driven, limited explicit attention to grammatical structure may delay the stabilization of syntactic forms, despite otherwise adequate communicative competence.

Taken together, these findings affirm that syntactic errors in five-year-old children should be interpreted as developmental markers within a dynamic acquisition process rather than as deficits. This synthesis bridges theoretical models of syntax acquisition with empirical evidence from early childhood education contexts, underscoring the need for pedagogical practices that support grammatical development through meaningful, structurally rich interaction rather than premature formal instruction.

CONCLUSION

This systematic literature review concludes that syntactic errors in the spoken language of five-year-old kindergarten children are systematic and developmentally driven rather than random or pathological. In response to RQ1, the findings show that omission, word order errors, subject-verb disagreement, and overgeneralization are the most prevalent error types in simple sentences. Addressing RQ2, these errors are primarily influenced by children's grammatical developmental stage, limited exposure to complex linguistic input, cognitive processing constraints, and classroom instructional practices. The review also identifies a significant research gap, namely the limited number of first-language studies focusing specifically on spontaneous spoken syntax in early childhood, suggesting the need for longitudinal and cross-linguistic research in future studies. Practically, the findings indicate that educators should implement targeted language interventions such as modeling complete sentence structures, expanding child utterances, and providing linguistically rich interaction rather than explicit grammar instruction. Overall, this review reinforces the importance of developmentally appropriate pedagogical strategies to support syntactic growth in early childhood education.

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