

The Role of Teachers in Stimulating Early Childhood Language Development Through Nature Learning

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Abstract. Language skills need to be stimulated early on so that children are able to communicate well. This study aims to describe the role of teachers in stimulating early childhood language development through nature-based learning. The study used a quantitative descriptive correlational approach with a sample of 50 children aged 4–6 years and 4 PAUD teachers. Data were collected through observation, questionnaires, and documentation. Language indicators include the ability to name natural objects, tell stories, answer questions, use new vocabulary, speak clearly, and discuss. Indicators of the teacher's role include planning, providing media, mentoring, giving open questions, communication motivation, and evaluation. Data were analyzed using descriptive statistics and simple correlations. The results are expected to be a reference for strengthening the role of teachers in nature learning to support children's language development.

Keywords: role of teacher, child language, nature learning

1 Introduction

Language development in early childhood is a fundamental aspect of overall growth, as it provides the foundation for communication, social interaction, and cognitive development. At the age of 4–6 years, children experience a rapid increase in vocabulary, sentence structure, and the ability to express ideas [1][2]. Early stimulation of language is therefore essential to ensure that children can communicate effectively and confidently in their daily lives. Without proper stimulation, language delays may hinder not only communication but also academic readiness and social-emotional adjustment [3][4].

Teachers play a central role in supporting and stimulating language skills in early childhood education settings. Their role goes beyond transferring knowledge; teachers are facilitators who create meaningful learning experiences that enhance children's speaking, listening, and comprehension abilities [5][6]. By planning, providing appropriate media, asking open-ended questions, motivating communication, and conducting evaluations, teachers directly influence the quality of language learning in the classroom. Therefore, understanding how teachers stimulate language development is crucial to designing effective pedagogical practices [7][8].

One effective approach to stimulating children's language development is through nature-based learning. Nature offers rich and authentic contexts where children can explore, observe, and

communicate about real phenomena around them. Activities such as naming plants and animals, describing natural processes, asking questions about the environment, and engaging in storytelling inspired by outdoor experiences help children expand their vocabulary and improve their communication skills [9][10]. Previous studies have emphasized that natural environments provide opportunities for hands-on experiences that foster both cognitive and linguistic growth [11][12].

Based on this background, this study aims to describe and analyze the role of teachers in stimulating early childhood language development through nature learning. By employing a quantitative descriptive correlational approach, the research explores the connection between teacher strategies and children’s language outcomes. The findings are expected to serve as a reference for educators and policymakers in strengthening the integration of nature-based learning into early childhood education, thereby supporting the holistic development of young learners [13][14].

2 Method

This study applied a quantitative descriptive correlational design to investigate the role of teachers in stimulating early childhood language development through nature-based learning. The correlational approach was chosen to describe the level of children’s language abilities and teacher roles while also identifying the relationship between the two variables. The research was conducted in early childhood education institutions with a sample of 50 children aged 4–6 years and 4 teachers. The sample was selected using purposive sampling to ensure that the participants met the study’s criteria, particularly those involved in implementing nature-based learning activities. This sampling procedure allowed the researcher to focus on contexts where teachers intentionally used nature as a medium for stimulating language development.

Table 1. The indicators and aspects.

Variable	Indicators	Description of Measured Aspects
Children’s Language Development	1. Naming natural objects	Ability to identify and mention plants, animals, or natural phenomena
	2. Storytelling	Ability to narrate simple events related to nature
	3. Answering questions	Responding appropriately to teachers’ or peers’ questions
	4. Using new vocabulary	Applying new words related to natural experiences
	5. Speaking clearly	Pronunciation and articulation in expressing ideas
	6. Discussing	Ability to engage in group discussions about nature
Teacher’s Role	1. Planning	Preparing lesson plans integrating nature-based language stimulation
	2. Providing media	Using realia, pictures, or natural objects as media
	3. Mentoring	Guiding children during exploration and communication

4. Giving open questions	Encouraging children to express ideas through non-closed questions
5. Communication motivation	Supporting and motivating children to talk and share ideas
6. Evaluation	Assessing children's language development after learning activities

Data were collected through observation, questionnaires, and documentation. Observation was used to record children's language behaviors during nature learning activities, such as naming objects, telling stories, and engaging in discussions. Questionnaires were distributed to teachers to capture their roles in planning, providing media, mentoring, posing open-ended questions, motivating communication, and conducting evaluations. Meanwhile, documentation such as lesson plans, learning media, and activity records was analyzed to strengthen the validity of data obtained from direct observation and teacher responses. The research instruments were constructed based on two main variables: children's language development and teachers' role in stimulation. Children's language development was measured through six indicators: naming natural objects, storytelling, answering questions, using new vocabulary, speaking clearly, and participating in discussions. Similarly, the role of teachers was assessed through six indicators: planning, providing media, mentoring, giving open-ended questions, motivating communication, and evaluating outcomes.

The collected data were analyzed using descriptive statistics to determine the distribution of scores on each indicator and simple correlation analysis to examine the relationship between teacher roles and children's language development. This combination of descriptive and correlational analysis provided a comprehensive understanding of how teacher practices in nature learning relate to children's emerging language skills.

3 Result

Descriptive Statistics of Children's Language Development

The observation data showed that children's language abilities varied across the six indicators.

Table 2. Children's language development (N = 50)

Indicator	High (%)	Moderate (%)	Low (%)
Naming natural objects	68	24	8
Storytelling	60	28	12
Answering questions	72	20	8
Using new vocabulary	58	30	12
Speaking clearly	66	26	8
Discussing	62	26	12

The results indicate that the majority of children were in the high category across all indicators, particularly in answering questions (72%) and naming natural objects (68%). However, the use of new vocabulary showed relatively lower percentages in the high category (58%), suggesting a need for continuous vocabulary enrichment in nature-based activities.

3.1 Teacher Roles in Stimulating Language Development

The results from the questionnaires and documentation indicated that teachers played an active role in facilitating children's language development through nature learning. Table 3 summarizes the distribution of teacher roles.

Table 3. Teachers' role in nature-based language learning (n = 4)

Indicator	Very Good (%)	Good (%)	Fair (%)
Planning	75	25	0
Providing media	50	50	0
Mentoring	75	25	0
Giving open-ended questions	50	50	0
Communication motivation	75	25	0
Evaluation	50	50	0

The findings suggest that teachers were generally consistent in preparing lesson plans, mentoring children, and motivating communication, with 75% rated very good in these aspects. However, the use of open-ended questions and evaluation practices were less optimal, with only 50% reaching the very good category.

3.2 Correlation Between Teacher Role and Children's Language Development

To examine the relationship between teacher roles and children's language development, a simple correlation analysis was conducted. The results showed a positive and significant correlation ($r = 0.62$, $p < 0.01$) between the two variables. This indicates that the more effective teachers are in planning, providing media, guiding, asking open-ended questions, motivating, and evaluating, the better the children's language development outcomes.

The results of this study provide empirical evidence that the teacher's role is strongly associated with the quality of early childhood language development in nature-based learning contexts. This finding emphasizes that teacher actions such as planning, mentoring, and motivating communication are not merely supportive, but act as determining factors in shaping children's linguistic growth. Given that the correlation was both positive and significant, it is essential to further interpret these outcomes in light of previous research and theoretical frameworks on early childhood education. The following discussion will therefore elaborate on how these findings align with existing studies, the implications for teaching practice, and potential areas for strengthening teacher competencies in fostering children's language skills.

4 Discussion

The findings of this study revealed a positive and significant correlation between the teacher's role in nature-based learning and the language development of children aged 4–6 years ($r = 0.62$, $p < 0.01$). This result indicates that the more effectively teachers engage in planning, providing media, mentoring, posing open-ended questions, motivating communication, and conducting evaluation, the better the language development outcomes achieved by young children. These findings highlight the central position of teachers as facilitators of learning,

aligning with the perspective that teacher guidance and intentional instructional practices are essential in fostering early language growth [7][6].

Language development in early childhood is highly dependent on the quality of linguistic interactions and experiences children receive in their learning environments. Teachers who actively use open-ended questions and encourage discussions provide opportunities for children to expand vocabulary, improve sentence structures, and enhance expressive abilities [3][4]. The strong correlation found in this study is consistent with previous evidence showing that children's language outcomes improve significantly when teachers create rich, responsive, and interactive learning environments [5][8].

The integration of nature-based learning further strengthens this relationship. Natural environments offer authentic contexts that stimulate curiosity and promote meaningful communication among children. Activities such as identifying plants, describing weather changes, and storytelling inspired by outdoor experiences allow children to use new vocabulary in real-life situations [12][9]. This aligns with the theory that experiential and context-rich learning environments enhance not only cognitive but also linguistic development [11]. Thus, the positive association between teacher roles and language development in this study can be explained by the synergy between effective teaching strategies and the richness of nature as a learning medium.

These findings have significant implications for early childhood education practices. Teachers should be equipped with strategies that integrate nature-based learning into everyday classroom routines, ensuring that language stimulation occurs in both structured and spontaneous activities. Professional development programs focusing on interactive communication strategies and outdoor pedagogy may further enhance teachers' ability to support children's linguistic growth [10][14]. Ultimately, this research underscores that when teachers optimize their role within a nature-based context, they can effectively support children's holistic development, especially in the domain of language.

Furthermore, the role of teachers in nature-based language stimulation must also be viewed within the broader framework of holistic child development. Language is not an isolated domain; it is closely interrelated with cognitive, social, and emotional growth. When teachers guide children in exploring natural phenomena, they not only expand vocabulary but also encourage curiosity, critical thinking, and collaborative interaction [15]. This integrated approach reinforces the idea that learning through nature allows children to construct meaning actively, combining linguistic skills with experiential knowledge. Thus, the significant correlation identified in this study suggests that effective teacher strategies in nature learning environments may act as catalysts for multidimensional development.

In addition, the findings of this study contribute to the growing body of evidence advocating for a shift from traditional, classroom-bound teaching methods toward more experiential and participatory approaches. Traditional methods often limit children's opportunities for expressive communication, while nature-based learning invites active participation, questioning, and storytelling that enrich linguistic growth [16]. The implication is that teacher preparation programs and in-service training should emphasize outdoor pedagogy and interactive communication strategies, equipping teachers with the ability to design meaningful,

context-rich experiences. By doing so, educational practices can better align with children's developmental needs and foster language competence as a foundation for lifelong learning.

5 Conclusion

This study highlights the crucial role of teachers in stimulating early childhood language development through nature-based learning. The findings demonstrate a significant positive correlation between the effectiveness of teacher strategies—such as planning, providing media, guiding, asking open-ended questions, motivating communication, and conducting evaluations—and children's language development outcomes. These results reinforce the notion that teacher engagement is not only supportive but also essential in shaping children's ability to communicate effectively.

Moreover, nature-based learning provides authentic contexts that enrich children's vocabulary, storytelling skills, and overall communication competence. By integrating natural experiences into daily classroom activities, teachers can foster not only linguistic growth but also curiosity, critical thinking, and social interaction. Therefore, the study underscores the importance of equipping teachers with competencies in outdoor pedagogy and communicative strategies. Strengthening these practices will support holistic child development and ensure that language learning becomes both meaningful and impactful in early education.

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