

THE RELATIONSHIP BETWEEN BILINGUAL METHOD AND VOCABULARY SKILLS IN EARLY CHILDHOOD AT INTERNATIONAL KINDERGARTEN SCHOOLS IN MAKASSAR

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ABSTRACT

Language development is a fundamental aspect of early childhood education because it influences children's cognitive, social, and communicative competencies. In the era of globalization, bilingual ability has become increasingly important for young learners, particularly in international-based educational settings. Previous studies have generally reported that bilingual education contributes positively to children's language acquisition; however, many of these studies focus broadly on bilingual learning without specifically examining how particular bilingual instructional practices such as code-switching and dual-language exposure affect English vocabulary development in Islamic kindergarten contexts in Indonesia. In addition, limited research has explored this issue within international Islamic early childhood institutions in Makassar, creating a gap in empirical evidence regarding the effectiveness of bilingual instructional implementation in such settings. This study aims to examine the relationship between bilingual instructional methods and the English vocabulary performance of children enrolled in international Islamic kindergartens in Makassar, Indonesia. The bilingual instructional methods investigated in this study include teachers' use of code-switching between Indonesian and English during classroom interaction, as well as dual-language exposure through learning activities, classroom communication, songs, storytelling, and visual media. Data were collected through classroom observations, teacher questionnaires, and English vocabulary tests designed to measure children's word knowledge. The findings revealed a statistically significant positive relationship between bilingual instructional practices and children's English vocabulary outcomes, with a Spearman correlation coefficient of $\rho = 0.395$ ($p < 0.05$). These results indicate that structured bilingual exposure and interactive language practices can support vocabulary acquisition in early childhood learners. The effectiveness of bilingual instruction was also influenced by teacher competence, engaging teaching strategies, and parental involvement in children's language learning. The novelty of this study lies in its focus on specific bilingual instructional strategies—particularly code-switching and dual-language exposure—within international Islamic kindergarten settings in Makassar, an area that has received limited scholarly attention. This study therefore contributes empirical evidence to the field of early childhood bilingual education by demonstrating how contextualized bilingual practices can foster English vocabulary growth among young learners in Islamic educational institutions.

Keywords: Bilingual method, English vocabulary, Early Childhood Education, Language Development, Makassar.

INTRODUCTION

Language development in early childhood constitutes a fundamental aspect of a child's overall growth and development (DeLuca, 2020). It not only functions as a medium of communication but also serves as a primary tool for thinking, understanding the environment, and building social relationships. During early childhood, language abilities develop rapidly in line with cognitive maturation and

social experiences. Therefore, appropriate language stimulation at this stage plays a crucial role in shaping children's future academic and social success (UNICEF, 2021).

In today's globalized world, language competence extends beyond mastery of a single language (Dolean, 2021). The rapid advancement of information technology, increased global mobility, and cross-cultural interactions demand individuals who are capable of communicating in more than one language (De Houwer, 2020). Consequently, multilingual education—particularly bilingual education—has become an essential component of modern educational systems. Language functions as a bridge for cultural exchange, intellectual expansion, and global participation, making bilingual competence increasingly valuable (UNESCO, 2023).

Bilingual education in early childhood refers to the structured and systematic use of two languages as media of instruction. This approach is not only intended to enhance children's linguistic abilities but also to support their cognitive, social, and emotional development (Grosjean, 2021). Recent research indicates that children raised in bilingual environments tend to demonstrate greater cognitive flexibility, stronger executive functioning, and more advanced problem-solving skills compared to monolingual children (Byers-Heinlein, 2020).

Furthermore, international organizations such as (UNESCO, 2023) emphasize that multilingual education at an early age contributes significantly to both academic development and intercultural understanding. Children who are exposed to multiple languages are more likely to develop sensitivity toward cultural diversity and adaptability in multicultural environments. This highlights the broader role of bilingual education in fostering not only linguistic competence but also global awareness (Cummins, 2021).

In Indonesia, the implementation of bilingual education has shown a significant increase, particularly in private and international educational institutions. English, as a global lingua franca, is commonly used as a second language in instructional settings (Hammer, 2020). Many parents are increasingly aware of the importance of early English exposure, leading them to enroll their children in bilingual or international kindergartens. This trend reflects a shift in

societal perspectives regarding the importance of early language education (Kalashnikova, 2021).

Early childhood is often referred to as the “golden age” of language development. During this period, children’s brains exhibit high plasticity, allowing them to absorb linguistic input naturally and efficiently. Recent neuroscientific studies confirm that early exposure to multiple languages enhances neural connectivity and supports long-term language proficiency (Kuhl, 2021), (Luk, 2020).

In practice, bilingual education can be implemented through various models, including immersion programs, transitional bilingual programs, and dual-language programs. Contemporary studies suggest that dual-language programs remain among the most effective models, as they provide balanced exposure to both languages and support long-term bilingual proficiency (Marchman, 2023)(Marian, 2022).

Despite its advantages, implementing bilingual education in early childhood settings is not without challenges. One of the primary issues is maintaining a balance between the first language (L1) and the second language (L2). Excessive emphasis on English may hinder the development of children’s native or national language, while insufficient exposure to English may limit the effectiveness of bilingual learning. Therefore, careful planning and appropriate instructional strategies are required to ensure balanced language development (Montrul, 2021)(Paradis, 2023).

In addition, the success of bilingual education is highly influenced by teacher competence, instructional methods, and parental involvement. Teachers who are proficient in both languages are better equipped to create engaging and meaningful learning experiences. Meanwhile, support from parents at home plays a crucial role in reinforcing language exposure and practice, thereby enhancing children’s language acquisition (Pliatsikas, 2020)(Rowe, 2020).

Vocabulary acquisition is one of the most critical components of language learning. Vocabulary serves as the foundation for all language skills, including listening, speaking, reading, and writing. Without sufficient vocabulary knowledge, children will struggle to comprehend and produce meaningful language. Recent

studies emphasize that early vocabulary development strongly predicts later academic achievement and literacy skills (Serratrice, 2021)(Sun, 2021).

Children's vocabulary development is influenced by various factors, including the richness of language input, frequency of interaction, and the methods used in instruction (Unsworth, 2020). Children who are exposed to diverse and meaningful language experiences tend to acquire a broader and more functional vocabulary. In bilingual contexts, children have the opportunity to develop vocabulary in two languages simultaneously, which can enrich their overall communicative competence (Valian, 2021).

A number of recent studies have examined the relationship between bilingual education and vocabulary acquisition. (Adesope et al., 2020)found that bilingualism positively affects both cognitive and linguistic development. Djahimo and Indahri (2021) reported that the effectiveness of bilingual education depends heavily on proper implementation and parental support. (Antoniou, 2022)found that bilingual children demonstrated better receptive vocabulary compared to their monolingual peers. Similarly, (Bialystok, 2021)identified a statistically significant relationship between bilingual instruction and vocabulary mastery among early childhood learners.

Makassar, as one of Indonesia's major urban centers, presents a unique multilingual environment. In addition to Bahasa Indonesia, local languages such as Makassarese and Buginese are widely spoken, along with English in educational contexts. This linguistic diversity provides a valuable setting for examining bilingualism in early childhood education.

The presence of international kindergartens in Makassar that implement bilingual instruction reflects the growing demand for multilingual education. According to data from the Ministry of Education's DAPODIK system (2024), several early childhood institutions in Makassar have integrated English into their instructional practices. However, the extent to which bilingual teaching methods influence children's English vocabulary development remains an area that requires further investigation.

Based on the above discussion, it can be concluded that bilingual education holds significant potential in supporting early childhood language development, particularly in vocabulary acquisition. However, its effectiveness largely depends

on how it is implemented in educational settings. Therefore, this study aims to analyze the relationship between bilingual teaching methods and English vocabulary ability among early childhood students in international Islamic kindergartens in Makassar.

This study addresses a critical gap in the existing literature on bilingual education, particularly in the context of early childhood education in Indonesia. While numerous studies have examined the general benefits of bilingualism, limited empirical research specifically investigates the relationship between bilingual teaching methods and English vocabulary development among young learners in international kindergarten settings, especially within Islamic educational institutions in Makassar. Previous studies tend to focus either on cognitive advantages of bilingualism or on broader language outcomes, without explicitly analyzing how specific instructional approaches influence vocabulary acquisition at the early childhood level.

The novelty of this study lies in its focus on the integration of bilingual instructional methods within international Islamic kindergartens, a context that combines global language demands with local cultural and religious values. Additionally, this research specifically examines English vocabulary skills as a measurable outcome of bilingual instruction, providing more focused and contextually relevant findings compared to prior studies. By situating the research in a multilingual urban environment such as Makassar, this study also offers new insights into how bilingual education operates in linguistically diverse settings.

The importance of conducting this study is underscored by the increasing demand for bilingual education in Indonesia and the need for evidence-based instructional strategies that effectively support early language development. Without a clear understanding of how bilingual methods influence vocabulary acquisition, educators and policymakers may struggle to design appropriate curricula and learning environments. Therefore, this research is expected to provide valuable contributions both theoretically, by enriching the discourse on bilingual education in early childhood, and practically, by offering guidance for teachers, parents, and educational institutions in implementing effective bilingual learning strategies. Ultimately, this study aims to support the development of young learners

who are not only linguistically competent but also well-prepared to participate in an increasingly globalized world.

MATERIALS AND METHOD

Materials

The materials used in this study consisted of research instruments and supporting materials designed to measure the implementation of the bilingual learning method and the English vocabulary ability of early childhood students. All materials were developed and adapted to suit the characteristics of children aged 4–6 years in international Islamic kindergarten settings (García & Wei, 2020).

The primary materials included:

1. Observation Instruments

An observation checklist was used to document the implementation of bilingual learning in classroom activities. The checklist covered indicators such as language alternation between English and Indonesian, teacher–student interaction patterns, use of bilingual learning media, and student engagement during bilingual instruction.

2. English Vocabulary Test Materials

A picture-based English vocabulary test was prepared to assess students' receptive and expressive vocabulary. The test materials included illustrated flashcards and visual prompts representing familiar objects, actions, colors, animals, and daily activities. The test was adapted from the Early Vocabulary Scale for Bilingual Children (EVSBC) and contextualized to Indonesian early childhood learning environments.

3. Teacher Questionnaire

A structured questionnaire was designed to collect data on teachers' bilingual teaching practices. The questionnaire materials included statements related to frequency of English use, strategies for vocabulary reinforcement, classroom language exposure, and perceived student vocabulary development. Responses were measured using a Likert scale.

4. Interview Guidelines

Semi-structured interview guides were prepared as supporting materials to obtain qualitative insights from teachers and school principals. The interview materials focused on perceptions of bilingual education effectiveness,

challenges in implementation, and institutional support for bilingual programs.

5. Documentation Materials

Supporting documents such as lesson plans, bilingual learning modules, school curriculum outlines, and photographs of classroom activities were collected to strengthen data triangulation (Hoff, 2021).

All materials were reviewed by experts in early childhood education and bilingual learning to ensure content validity, age appropriateness, and alignment with the research objectives.

Method

This study employed a quantitative approach with a correlational research design to examine the relationship between the implementation of bilingual instructional methods and the English vocabulary ability of early childhood students. The correlational design was specifically selected because the study aimed to identify the degree and direction of the relationship between the two variables—bilingual instruction and children’s vocabulary achievement—without manipulating the existing learning conditions or introducing experimental treatment. Since the bilingual learning practices had already been naturally implemented in the selected schools, the researcher only observed and measured the extent to which these instructional practices were associated with students’ English vocabulary performance (Nation, 2022). This design is therefore considered appropriate for investigating naturally occurring educational phenomena through numerical data analysis and statistical correlation techniques.

The research was conducted from January to May 2024 in four international Islamic kindergartens located in Makassar. The selected institutions included TK Islam Al Azhar 34, TK Islam Al Madinah International School, TK Islam Al Biruni, and TK Islam Khalifah International Makassar. These schools were purposively selected because they consistently implement bilingual instructional practices, particularly through code-switching and dual-language exposure using Bahasa Indonesia and English in classroom communication, learning activities, storytelling, songs, and daily interactions (Niklas & Schneider, 2022).

The population of this study consisted of all students enrolled in bilingual classes during the 2023/2024 academic year, totaling 743 children. From this

population, a sample of 150 students was selected using proportionate random sampling to ensure fair representation from each institution. The participants were children aged between 4 and 6 years who had been exposed to bilingual instruction for at least one semester. Participation was also based on parental consent as part of ethical research considerations.

Data collection was carried out using multiple techniques to obtain comprehensive information. Classroom observations were conducted to capture the actual implementation of bilingual learning, including language use by teachers and students, interaction patterns, and the level of student engagement. To assess English vocabulary ability, a picture-based vocabulary test was employed, which was adapted and modified to suit the developmental characteristics of young learners in the Indonesian context (Unsworth, 2020).

In addition, teacher questionnaires were administered to collect information regarding instructional strategies and practices used in reinforcing vocabulary learning within bilingual settings. Semi-structured interviews were also conducted to gain deeper insights into teachers' experiences in implementing bilingual instruction, including the challenges encountered and the strategies used to enhance children's language development (Adesope et al., 2020).

Prior to data collection, all research instruments underwent a validation process involving experts in early childhood education and bilingual learning. Reliability testing was conducted to ensure consistency, resulting in a Cronbach's Alpha coefficient of 0.87, which indicates a high level of internal reliability.

The collected data were analyzed using both descriptive and inferential statistical methods. Descriptive statistics were used to present an overview of participant characteristics and their level of English vocabulary mastery. Meanwhile, inferential analysis was conducted using the Spearman Rank correlation test to determine the strength and direction of the relationship between the bilingual learning method and English vocabulary ability. Hypothesis testing was carried out at a significance level of 0.05. All statistical analyses were performed using SPSS version 26.

RESULTS

Overview of the Research Setting

This study was conducted in four well-established Islamic international kindergartens in Makassar, namely TK Islam Al Azhar 34, TK Islam Al Madinah International School, TK Islam Al Biruni, and TK Islam Khalifah International. Although each institution applies its own instructional style, all share a common emphasis on bilingual education, utilizing both English and Bahasa Indonesia in classroom instruction.

Findings from classroom observations indicate that bilingual practices are not limited to formal lessons but are consistently incorporated into various daily learning activities. These include storytelling sessions, language-based games, and religious instruction. Teachers demonstrated flexible language use by alternating between English and Indonesian to support understanding while still exposing children to both languages in a balanced manner. Learning activities were often organized around themes, enabling children to connect new vocabulary with real-life contexts.

In addition to instructional practices, the learning environment also played a supportive role. Classrooms were equipped with a variety of bilingual learning resources, such as posters, flashcards, and digital tools including tablets and smartboards. These resources provided visual and interactive support that helped children associate words across both languages more effectively, thereby reinforcing their vocabulary development.

Characteristics of Respondents (150 Samples)

The participants involved in this study consisted of 150 children aged between 4 and 6 years, drawn from four international Islamic kindergartens in Makassar. These respondents represent early childhood learners who are actively engaged in bilingual learning environments within their respective schools.

Tabel 1. A summary of the demographic profile of the participants is presented in the following section.

Variable	Category	Frequency	Percentage (%)
Gender	Male	76	50.7
	Female	74	49.3
Age	4 years	38	25.3
	5 years	65	43.3

	6 years	47	31.4
Language Background	Indonesian only	59	39.3
	Bilingual (Indonesian–English)	91	60.7

The data indicate a relatively even distribution between male and female participants, with a slight predominance of boys. In terms of age, most of the children (43.3%) were five years old, aligning with the typical age range for the middle level of kindergarten (TK B) in Indonesia.

A considerable number of participants were reported to come from homes where both English and Bahasa Indonesia were used in daily communication. This early exposure to two languages appears to support children's responsiveness during classroom activities, particularly in understanding instructions and engaging in vocabulary-related tasks. Compared to children from single-language environments, they tended to demonstrate greater confidence when interacting in English.

Description of Variables

1. Bilingual Method Implementation

The application of bilingual instruction across the selected schools reflects a combination of consistent exposure to two languages, meaningful use of language in context, and learner-centered teaching strategies. Based on responses gathered from teacher questionnaires, several common patterns in instructional practice were identified, as outlined below:

Table 2. Bilingual Method Implementation Score

Indicator	Mean Score (1–5 scale)	Category
Frequency of English Use in Class	4.2	High
Integration of English in Daily Conversation	4.0	High
Use of Visual Aids and Songs	4.4	Very High
Teacher–Student Code-Switching	3.9	Moderate–High
Parent Involvement in Bilingual Support	3.6	Moderate

The overall mean score of 4.02 indicates that the bilingual approach has been applied in a relatively consistent manner, with both English and Bahasa

Indonesia actively used during classroom instruction. Teachers noted that students tended to show greater enthusiasm and engagement when new English vocabulary was introduced through interactive activities such as singing, storytelling, and role-playing.

Classroom observations also highlighted the frequent and natural use of code-switching as a strategy to support understanding. Teachers often combined brief English expressions with simple explanations in Indonesian to clarify meaning. For instance, during routine activities like circle time, phrases such as “Let’s clean up!” or “Good morning, friends!” were used, followed by short Indonesian cues to help children grasp the intended message.

2. Students’ Vocabulary Ability

Students’ English vocabulary skills were assessed using a test consisting of 30 picture-based items. Each item represented commonly used words drawn from familiar categories such as animals, fruits, colors, objects, and everyday actions. The scoring system was based on the number of correct responses, both in terms of recognition and verbal expression.

Table 3. Students’ Vocabulary Ability

Score Range	Interpretation	Frequency	Percentage (%)
25–30	Very High	32	21.3
20–24	High	58	38.7
15–19	Moderate	41	27.3
10–14	Low	15	10.0
<10	Very Low	4	2.7
Total		150	100

The average score of 21.6 reflects that the majority of participants have achieved a relatively strong level of English vocabulary mastery. This finding indicates that regular exposure to bilingual instruction contributes positively to children’s language development. Teachers also observed that many children were able to use simple English words spontaneously in everyday interactions, particularly basic nouns and verbs such as *eat*, *play*, *run*, *apple*, *dog*, and *book*.

In addition, children who were raised in bilingual family environments tended to achieve better results compared to those from monolingual households. This pattern suggests that continuous language exposure outside the classroom plays an important role in strengthening vocabulary acquisition.

Statistical Analysis

To examine the proposed hypothesis, the Spearman Rank Correlation test was applied to determine the association between the bilingual learning method (X) and students’ vocabulary ability (Y).

Summary of Results:

Table 3. Statistical Analysis Result

Variables	Correlation Coefficient (ρ)	Sig. (2-tailed)	N	Interpretation
Bilingual Method (X) – English Vocabulary Ability (Y)	0.395	0.031	50	Significant

The correlation coefficient of $\rho = 0.634$ indicates a strong positive relationship between the bilingual method and children’s vocabulary ability. Since the p-value ($0.000 < \alpha (0.05)$), the null hypothesis (H_0 : no relationship) is rejected.

This means that the better the implementation of the bilingual method, the higher the students’ vocabulary mastery. The result aligns with previous findings by Shofwati & Susanti (2023) and Bialystok (2016) that bilingual instruction enhances children’s linguistic awareness and word retention.

Regression Analysis

A simple linear regression was conducted to determine the predictive influence of the bilingual method on vocabulary ability.

Table 3. Regression Analysis Result

Model Summary	R	²	Adjusted R ²	Sig. F Change
Regression	0.512	0.262	0.258	0.000

The R^2 value of 0.262 indicates that 26.2% of the variance in vocabulary ability is explained by the bilingual method. The remaining 73.8% is influenced by other factors, such as home environment, teacher quality, and media exposure. This finding underscores that while bilingual teaching is important, vocabulary development is multifactorial.

DISCUSSION

The statistical analysis revealed a positive and statistically significant relationship between the implementation of bilingual instructional methods and the English vocabulary ability of early childhood learners, with a Spearman correlation coefficient of $\rho = 0.395$ and a significance value of $p < 0.05$. This result indicates a moderate positive correlation, meaning that the more consistently bilingual instructional practices were implemented, the higher the children's English vocabulary performance tended to be. These findings demonstrate that bilingual learning contributes meaningfully to vocabulary development among children enrolled in international Islamic kindergartens in Makassar.

The classroom observations and teacher questionnaire results showed that bilingual instruction in the participating schools was implemented through several practices, particularly code-switching and dual-language exposure. Teachers frequently alternated between Bahasa Indonesia and English during classroom communication, storytelling, singing activities, classroom instructions, and daily interactions. Children were also exposed to bilingual learning materials such as visual labels, picture books, educational songs, and interactive games.

The findings further indicated that children demonstrated better vocabulary performance when they were actively involved in meaningful classroom activities rather than passive memorization exercises. Activities such as role-playing, singing, and interactive conversations appeared to encourage children to understand vocabulary contextually. In addition, schools that provided richer bilingual environments—including visual displays, labeled classroom objects, and routine English exposure—showed stronger vocabulary outcomes among learners.

Data obtained from observations and questionnaires also suggested that teacher competence and parental support contributed to the effectiveness of bilingual learning. Teachers who used expressive gestures, visual media, and contextual explanations were more successful in maintaining children's

engagement during language activities. Likewise, children whose parents provided simple English exposure at home, such as reading picture books or using basic English expressions in daily communication, tended to show stronger vocabulary retention.

The positive correlation identified in this study suggests that consistent bilingual exposure supports children's vocabulary acquisition by increasing opportunities for repeated language interaction in meaningful contexts. The findings imply that vocabulary development is more effective when children encounter language naturally through communication, play, and classroom routines rather than through isolated word memorization.

The results also indicate that bilingual instruction becomes more effective when teachers use purposeful code-switching strategies. By connecting familiar concepts in Bahasa Indonesia with new English vocabulary, teachers help children construct understanding gradually and reduce difficulties in comprehension. Furthermore, the presence of bilingual visual and auditory stimuli in the classroom appears to strengthen children's ability to associate words with meanings and retain vocabulary over time.

Another important interpretation is that continuity between school and home environments contributes positively to children's language development. Even limited exposure to English outside the classroom may reinforce vocabulary learning by increasing the frequency of language use in children's everyday experiences.

The findings of this study support theories of early childhood language acquisition which emphasize the importance of meaningful interaction and environmental exposure in language learning. From a sociocultural perspective, children develop language competence through active interaction with teachers, peers, and learning environments. In bilingual classrooms, language learning occurs not only through direct instruction but also through social communication and contextual experiences.

The results are also consistent with bilingual education theories suggesting that dual-language exposure can strengthen associative learning processes. Exposure to two linguistic systems allows children to connect concepts across languages, thereby facilitating vocabulary acquisition and comprehension. In

addition, cognitive theories of bilingualism propose that managing two languages encourages mental flexibility, attention control, and information processing skills, which may indirectly support language learning performance.

Compared with previous studies, the present research confirms that bilingual learning positively influences early childhood language development. However, this study also emphasizes that the effectiveness of bilingual instruction depends largely on the quality of implementation. Bilingual learning is more beneficial when language exposure is interactive, contextual, and integrated into daily classroom experiences rather than limited to direct translation practices.

Despite these positive findings, several limitations should be acknowledged. This study focused only on English vocabulary development and did not examine the development of other languages used by the children. In addition, the research was conducted in a limited number of urban international Islamic kindergartens, which may limit the generalizability of the findings to other educational settings. The relatively short period of data collection also restricted the observation of long-term language development outcomes.

Nevertheless, this study provides empirical evidence that bilingual instructional practices particularly code-switching and dual-language exposure—can positively support English vocabulary development among early childhood learners. The findings highlight the importance of improving teacher competence, creating enriched bilingual learning environments, and strengthening parental involvement to maximize the effectiveness of bilingual education in early childhood settings.

CONCLUSION

Drawing on the overall findings of this study, it can be inferred that the application of bilingual instructional practices is meaningfully associated with the English vocabulary development of early childhood learners in international Islamic kindergartens in Makassar. The relationship identified is positive in nature, indicating that more consistent and well-implemented bilingual exposure tends to correspond with higher levels of vocabulary mastery among children.

Statistical analysis revealed a moderate correlation coefficient ($r = 0.512$) with a significance level below 0.05, confirming the presence of a statistically meaningful relationship between the variables. Furthermore, the regression results

indicate that bilingual learning contributes approximately 26.2% to the variance in children's English vocabulary ability. Although this suggests that other factors also play a role, the bilingual approach remains a substantial contributor to language development in this context.

The study also highlights several key elements that support the effectiveness of bilingual learning. First, engaging instructional strategies—such as games, songs, and structured daily routines—create meaningful learning experiences that facilitate vocabulary acquisition. Second, the teacher's role is crucial in guiding the appropriate use of both languages, enabling children to link familiar linguistic concepts with new English expressions. Third, the multilingual nature of the surrounding environment provides additional exposure that strengthens children's ability to process and use multiple languages. Fourth, the simultaneous use of two languages appears to contribute positively to cognitive processes, particularly in enhancing attention and memory functions.

Despite these positive outcomes, several challenges remain evident. Variations in teacher proficiency, limited parental involvement, and insufficient exposure time to English may reduce the overall effectiveness of bilingual instruction. Addressing these issues requires systematic efforts, including continuous professional development for teachers, the design of more structured learning programs, and stronger collaboration between schools and families.

In a broader sense, bilingual education at the early childhood level extends beyond language learning alone. It also supports the development of cognitive readiness, adaptive thinking, and the ability to function in diverse cultural settings. The findings of this study suggest that when implemented thoughtfully and consistently, bilingual instruction can serve as an effective approach to enhancing the quality of early childhood education, particularly within multicultural environments such as Makassar.

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