



Indonesian Language Attrition and Obstacles in Indonesian Diaspora Children in a Multilingual Environment: A Neuropsycholinguistic Perspective

Yunia Tiara Riski¹, Wahyu Sukartiningsih^{2*}, Hendratno³, Mochamad Nursalim⁴,
Suryanti⁵, Diana Rahmasari⁶, Muhammad Nur Huda⁷

¹Indonesian School of Davao, Philippines.

^{2*,3,4,5,6}Department of of Basic Education, Universitas Negeri Surabaya, Indonesia.

⁷Department of Educational Management, Universitas PGRI Semarang, Indonesia.

*Corresponding Author. Email: wahyusukartiningsih@unesa.ac.id

Abstract: This study aims to analyze the language barriers experienced by Indonesian diaspora children in Mindanao in learning Indonesian for Foreign Speakers (BIPA) from a neuropsycholinguistic perspective by identifying the forms of decline in Indonesian language competence and the neurocognitive factors influenced by a multilingual environment. The study employed a qualitative approach using a Research and Development (R&D) design based on the 4D model, with a particular focus on the define stage. The research subjects consisted of seven students and two teachers at the Indonesian School of Davao, selected through purposive sampling. Data were collected through semi-structured interviews, participant observation, and document analysis and were analyzed using an interactive model involving data reduction, data presentation, and conclusion drawing. The findings indicate that the language barriers experienced by the participants included difficulties in syntactic structure, tense usage, language registers, and code-mixing caused by interference from Visayan and Tagalog. Contrastive analysis revealed that differences in sentence patterns (S-V-O vs. V-S-O) and grammatical systems were the primary sources of errors. From a neuropsycholinguistic perspective, these barriers were associated with limitations in working memory, attention, and lexical representation, which were influenced by limited exposure to the Indonesian language. The findings also showed that the students' receptive and expressive language abilities remained limited, particularly in command comprehension, vocabulary mastery, and verbal memory. This study contributes theoretically to the enrichment of neuropsycholinguistic studies in the context of diaspora children and language learning. Practically, the findings provide a foundation for designing BIPA instruction that is adaptive, contextual, and aligned with learners' neurocognitive characteristics.

Article History

Received: 28-03-2026

Revised: 30-04-2026

Accepted: 19-05-2026

Published: 20-06-2026

Key Words:

Attrition; Diaspora
Children; BIPA;
Language Barriers;
Neuropsycholinguistics;
Multilingualism.

How to Cite: Riski, Y. T., Sukartiningsih, W., Hendratno, Nursalim, M., Suryanti, Rahmasari, D., & Huda, M. N. (2026). Indonesian Language Attrition and Obstacles in Indonesian Diaspora Children in a Multilingual Environment: A Neuropsycholinguistic Perspective. *Jurnal Kependidikan : Jurnal Hasil Penelitian Dan Kajian Kepustakaan Di Bidang Pendidikan, Pengajaran, Dan Pembelajaran*, 12(2), 667-678. <https://doi.org/10.33394/jk.v12i2.20446>



<https://doi.org/10.33394/jk.v12i2.20446>

This is an open-access article under the [CC-BY-SA License](https://creativecommons.org/licenses/by-sa/4.0/).



Introduction

Language as a means of communication and also as a representation of identity and a cognitive medium in the thought process. In the context of diaspora children, the position of the mother tongue or national language has shifted significantly due to the dominance of the environment's language (Riski et al., 2023). Indonesian diaspora children in Mindanao refer to children of Indonesian citizens or descendants who live and grow up in the region due to parental migration, whether for work, marriage, or other socio-economic reasons (Putri, 2019; Riski, et al., 2025). Indonesian diaspora children in Mindanao, Philippines, grow up in a multilingual environment dominated by English, Filipino (Tagalog), and local languages

such as Visayas and Sangir (Wiratri, 2024). This condition causes Indonesian to no longer be used routinely in daily interactions, both in family and social environments (Yudhawasthi et al., 2024; Wiratri, 2024). This situation differs from the Indonesian diaspora in Malaysia, which shares linguistic ties through the Malay language (Noor, 2009). The Indonesian diaspora in the Netherlands is also supported by a stronger Indonesian language community and environment. In Mindanao, diaspora children face high language assimilation pressures due to the use of multiple languages in education, social interactions, and local culture (Mariana et al., 2026; Riski et al., 2023). This situation accelerates Indonesian language attrition and impacts children's language skills and linguistic identity (Mariana et al., 2026). Thus, language plays a crucial role as a means of communication and identity. Among Indonesian diaspora children in Mindanao, the dominance of the local language has led to a shift in Indonesian language use and skills. This phenomenon impacts linguistic aspects and has implications for children's cognitive development and linguistic identity, making it a strategic issue in neuropsychological and linguistic studies.

The lack of exposure to Indonesian in diaspora environments has resulted in a decline in children's language competence. Another impact is the phenomenon of language attrition, namely the gradual loss of language skills due to lack of use (Köpke et al., 2018). In the context of BIPA learning, this condition presents a challenge in itself because students do not fully have the status of foreign language learners, but rather as heritage speakers (heritage learners) with unequal competencies at appropriate ages and levels (Riski et al., 2023; Izzah et al., 2025). Several studies have shown that difficulties in second language learning are not only caused by linguistic factors, but are also related to cognitive processes such as attention, memory, and motivation (Nurisra & Huda, 2026). From a neuropsycholinguistic perspective, language processing involves a complex system that encompasses specific brain areas and cognitive mechanisms that support language production and comprehension (Binaan & Kuripan, 2024). Therefore, analysis of language barriers in diaspora children needs to consider the neurocognitive dimension to gain a more comprehensive understanding.

The urgency of this study is further strengthened by recent research showing that variations in language exposure in multilingual children directly influence the development of executive functions, working memory, and attention control, which play a role in successful language acquisition (Bialystok, 2017; DeLuca et al., 2019). Thus, studying language barriers from a neuropsycholinguistic perspective is important not only for practical purposes but also as an academic contribution to understanding the interaction between language and the brain in diaspora contexts.

Several previous studies have shown that learning Indonesian for Foreign Speakers (BIPA) still faces various problems, particularly in the linguistic aspect. Learners often make mistakes, such as in syntactic structure and understanding word meanings, indicating suboptimal second language mastery (Darihastining et al., 2018). Furthermore, BIPA learning is influenced not only by linguistic factors, but also by cognitive, affective, and sociocultural aspects, as well as the learner's psychological condition (Nasrullah, 2019). Learning ability is closely related to cognitive functions such as memory and attention, so neuropsychological disorders can have a significant impact on low learning outcomes (Pratiwi, et al., 2022). Thus, the problems in BIPA learning do not only stem from linguistic aspects but are also influenced by cognitive, affective, sociocultural, and psychological factors of the learner, necessitating a holistic and adaptive learning approach.

One important factor in language problems is the cognitive aspect related to information processing and memory management. Gagne's information processing theory explains that memory management includes the processes of encoding, storing, and retrieving



information (Sufyan, 2025). In this context, the retrieval process is highly dependent on the quality and quantity of previously stored information. When the Indonesian vocabulary entered into memory is still limited, the resulting memory traces are weak, resulting in less than optimal retrieval (Habiburrahman et al., 2025). This is in line with studies stating that language learning involves the interconnected processes of encoding, storage in long-term memory, and retrieval (Mickan et al., 2019). This condition is further complicated by the interference of environmental languages such as Tagalog and English, which are more frequently used. The dominance of these two languages (Tagalog and English) strengthens the memory pathways of the environmental languages of diaspora children, making rarely used Indonesian more difficult to access. This phenomenon is related to attrition, which is the weakening of language access due to competition between languages in the cognitive system (Mickan et al., 2019). Thus, Indonesian language retrieval in diaspora children is hampered because the brain tends to access the more dominant language more quickly, resulting in difficulties in remembering, selecting, and using Indonesian vocabulary appropriately.

Many previous studies have examined the phenomenon of learning Indonesian for Foreign Speakers (BIPA). However, these studies focused on general foreign learners, neglected the characteristics of diaspora children with different family language backgrounds, and failed to integrate neurocognitive mechanisms to explain language difficulties. Studies on BIPA in diaspora children, particularly in the Mindanao region, are still relatively limited, particularly those integrating a neuropsycholinguistic perspective. This gap indicates that there are not many studies that specifically examine the relationship between language barriers and neurocognitive factors in the context of diaspora child learners. Thus, there is a significant research gap in integrating studies of language barriers, the characteristics of diaspora child learners, and neuropsycholinguistic approaches within a comprehensive analytical framework.

Based on this gap, this study aims to analyze the language barriers experienced by Indonesian diaspora children in Mindanao in learning Indonesian for Foreign Speakers (BIPA) through a neuropsycholinguistic perspective, by identifying forms of decline in Indonesian language competence and neurocognitive factors influenced by a multilingual environment. Theoretically, this research contributes to enriching neuropsycholinguistic studies, particularly in the context of language acquisition by diaspora children in multilingual environments. Practically, this research provides a basis for identifying the characteristics and challenges faced by diaspora children in learning Indonesian Language (BIPA). This can then serve as a foundation for developing learning models that are more adaptive, contextual, and aligned with their neurocognitive conditions. Without an understanding of language barriers associated with neuropsycholinguistic aspects, the learning approach designed has the potential to be incompatible with the needs and cognitive characteristics of learners.

Research Method

This research uses a qualitative approach of research and development (R&D) with 4D model (Define, Design, Develop, Disseminate) developed by Thiagarajan et al. (1974). The focus of the research is placed on the Define stage because this stage is the initial foundation in designing BIPA learning designs for Indonesian diaspora children that are in line with the language and cognitive development of learners. The emphasis is on this stage. Define aims to identify learner characteristics and learning needs accurately so that the learning design is relevant and meaningful. This study focuses on the stage of analyzing BIPA learning constraints from a neuropsycholinguistic perspective as the basis for

designing a learning model, so that the research results are at the initial analysis stage before further development and testing. The subjects of this study involved seven learners and two teachers at the Indonesian School of Davao (SID) who were selected purposively to obtain in-depth and contextual data. Consequently, the findings of this study are specific to the research context and cannot yet be generalized widely.

Table 1. Participant Data

No.	Participants	Elements	Description (Enter SID during class/subject teacher)	Dominant Language	Level of proficiency	Code
1	RLM	Student	Grade II	Visayan language	A1	P1
2	KJP	Student	Grade III	Visayan language	A1	P2
3	DYL	Student	Grade IV	Visayan language	A1	P3
4	JSP	Student	Grade IV	Visayan language	A1	P4
5	MBT	Student	Grade IV	Visayan language	A1	P5
6	CJTS	Student	Grade IV	Visayan language	A1	P6
7	JMM	Student	Grade IV	Visayan language	A1	P7
8	YIT	Teacher	Dormitory Supervisor, Economics Teacher, and Language Matriculation Teacher	Indonesian language	Native speaker	G1
9	DNK	Teacher	Indonesian Arts and Culture and Language Teacher	Indonesian language	Native speaker	G2

Data collection was conducted through semi-structured interviews, participant observation, and analysis of learning documents. Interviews were used to identify language barriers experienced by learners based on their Indonesian language learning experiences. Observations were aimed at observing language difficulties that emerged during learning interactions. Document analysis was conducted to examine the suitability of the learning model materials and activities to the learners' needs and language abilities.

The data analysis technique in this study refers to the Miles and Huberman interactive analysis model, which includes data reduction, data presentation, and conclusion drawing (Ridder, 2014). The analysis was conducted thematically through open coding to identify forms of language barriers, axial coding to group barriers based on linguistic aspects, such as sentence structure and understanding of meaning, and selective coding to formulate main themes that explain the relationship between language barriers and children's neuropsycholinguistic processes. Data reduction focused on findings related to language processing limitations, the influence of the first language, and low exposure to Indonesian. Data presentation was carried out in the form of a thematic narrative that links language barriers to stages of language comprehension, while the drawing of conclusions was directed at interpreting the relationship between neuropsycholinguistic factors and learners' language difficulties. The entire analysis process is carried out repeatedly by applying triangulation of data sources to maintain the validity of the findings.

Results and Discussion

Language Barriers in BIPA Learning for Diaspora Children

The implementation of Indonesian Language Learning for Foreign Speakers (BIPA) has experienced its own dynamics. Language barriers in BIPA learning, according to Holovatenko (2025), include: syntactic structure, sentence effectiveness, code switching or code mixing, ellipsis (omission of word elements), and misunderstanding of word meaning.



Research by Amala & Asteria (2024) explains the forms of errors second language learners make, including sentence structure, tense, language level, and greetings.

Based on findings in the field, several BIPA learners in Mindanao, Philippines, who are elementary school-aged diaspora children, stated that they had difficulty understanding Indonesian sentence structures, as expressed by participants in the following interview excerpt.

The problem is that it's difficult to put together sentences because it's different from Visayan and Tagalog. (P1)

In Visayan, "I'm hungry" is "Gutom ko." In Indonesian, "Aku dulu" is used. (P2)

The problem lies more in the different structures, as Visayan and Tagalog, like English, have changes in the form of predicates that are adjusted to the tenses of the time markers in the sentence. (G2)

Based on this quote, it can be seen that the main obstacle experienced by learners lies in the differences in the language structure systems between Indonesian and Visayan and Tagalog. This difference is particularly evident in the word order patterns in sentences, where Indonesian uses a relatively fixed pattern, such as the subject at the beginning of the sentence, while Visayan and Tagalog have a more flexible or typologically different structure.

From the perspective of BIPA learners, diaspora children in Mindanao often encounter the habit of using code-switching language such as “*Gutom ko*” (Visayan) and *Gutom ako* (Tagalog) with a Predicate-Subject pattern which should be in Indonesian “*Saya lapar*” with a Subject-Predicate pattern. Based on these differences, a solution to overcome language barriers in BIPA learning for diaspora children in the aspect of sentence structure requires contrastive analysis.

Several previous studies have described the language barriers experienced by Indonesian diaspora children in Mindanao. Research by Riski et al., (2024) and Yudhawasthi et al., (2024) explains that low Indonesian language proficiency among children of Indonesian descent is caused by limited use of Indonesian within the family environment, particularly due to a lack of parental involvement in accustoming children to daily communication in Indonesian. Solutions to overcome language learning barriers can be implemented through content analysis techniques (*content analysis*) (Ardiansyah & Harjanti, 2023). However This approach places more emphasis on the meaning and themes of discourse than on a thorough study of linguistic structures. In this study, the researchers chose to use contrastive linguistic analysis because this approach allows for systematic comparisons between two or more languages to identify structural similarities and differences that could potentially lead to language barriers or errors (Amala & Asteria, 2024). Contrastive analysis is considered more relevant because the language barriers studied relate to differences in syntactic, morphological, and grammatical structures between languages. Therefore, this approach is not only able to describe the forms of barriers that arise but also explains their sources and causes linguistically and provides a more applicable basis for language improvement or learning efforts.

Contrastive analysis is a comparison between the original language (B1) and the target language (B2). Contrastive analysis is a linguistic approach that compares the language being taught (in this case, Indonesian) with the learner's first language (in this case, Visayan and Tagalog). This is useful for overcoming the difficulties of learning a second language. The following contrastive analysis was compiled by the researcher to compare the sentence structures of Indonesian, Visayan, and Tagalog.

Table 2. Sentence Structure in Indonesian, Visayan, and Tagalog

No.	Sentence Structure		
	Indonesian	Visayan language	Tagalog language
	Subject- Verb- Object (S-V-O)	Verb–Subject–Object (V-S-O / V-O-S)	Verb–Subject–Object+ voice system (V-S-O + voice system)
1.	Saya makan nasi	<i>Nagkaon ko og kan-on.</i>	<i>Kumain ako ng kanin.</i>
2.	Dia membaca buku	<i>Nagbasa siya og libro</i> <i>Nagbasa og libro siya.</i>	<i>Nagbabasa siya ng libro.</i>
3.	Kami menonton bola.	<i>Nagtan-aw kami og bola.</i> <i>Nagtan-aw og bola kami.</i>	<i>Nanood kami ng bola.</i>

Based on the table presented, theoretically, in terms of syntactic structure, word formation, and phrase construction, each language, whether Indonesian, Visayan, or Tagalog, has a different grammatical system. In Indonesian, for example, the *Diterangkan–Menerangkan* (DM) or Head-Modifier pattern is used, where the core element usually precedes the explanatory element, and each word has a clear syntactic function in the sentence (Amala & Asteria, 2024). Furthermore, there are also differences in the grammatical system, particularly in the marking of time aspects. Visayan and Tagalog languages show changes in the form of predicates or certain markers related to time (tense or aspect), while Indonesian does not recognize changes in verb form based on time, but instead uses lexical time adverbs (Riski et al., 2025). Neurocognitive studies view this condition as related to the mechanisms of lexical access and syntactic processing. In this condition, language representations in two language systems are simultaneously active and compete with each other (Hadia & Batubara, 2025). This situation has the potential to cause proactive interference, namely the disruption of the first language pattern (Visaya) on the use of the second language (Indonesian), so that students tend to maintain or transfer V–S structures into Indonesian language production. As a result, the cognitive load increases and students experience grammatical confusion or difficulty in constructing Indonesian sentences correctly. The problem of grammatical confusion is reinforced by what the following participants expressed.

I'm used to using Visayan because I hear it often. (P4)

I often get confused and mix things up when I say things. (P3)

If the Indonesian language structure is SVO, here VSO or VOS has tenses like English. (G2)

These findings indicate the influence of the first language on the second language, which results in difficulties in constructing sentence structures correctly. Therefore, the process of learning Indonesian for Visayan and Tagalog speakers requires an explicit emphasis on understanding syntactic patterns and differences in grammatical systems to minimize language errors. Code switching, or code mixing in sociolinguistics, is also a fairly dominant form of error. This phenomenon occurs due to interference between the first language (L1) and the second language (L2), resulting in inconsistent use of the target language, both in terms of structure and word choice (Rosiyana, 2020). The use of tenses, the elements that mark time in sentences, is also one of the language barriers in BIPA learning (Amala & Asteria, 2024). The following is a contrastive analysis of the differences in tenses (elements that mark time) in sentences in Indonesian, Visayan, and Tagalog.

Table 3. Basic words influenced by tense

No.	Basic words influenced by time		
	Indonesian	Visayan language	Tagalog language
1.	<i>Saya (sedang) makan</i>	<i>Naga-kaon ko karon.</i>	<i>Kumakain ako ngayon.</i>

	<i>sekarang. (I am eating now)</i>	Explanation: <i>naga-</i> = ongoing/ongoing aspect <i>kaon</i> = eat <i>ko</i> = me <i>karon</i> = now	Explanation: <i>kumakain</i> = eating <i>ako</i> = me <i>ngayon</i> = now
2.	Saya (sudah) makan kemarin. <i>(I have eaten yesterday)</i>	<i>Nikaon ko gahapon.</i> Explanation: <i>ni-</i> = past / already <i>gahapon</i> = yesterday	<i>Kumain ako kahapon.</i> Explanation: <i>kumain</i> = have eaten <i>kahapon</i> = yesterday
3.	Saya (akan) makan besok. <i>(I (will) eat tomorrow)</i>	<i>Mokaon ko ugma.</i> Explanation: <i>mo-</i> = will / future <i>ugma</i> = tomorrow	<i>Kakain ako bukas.</i> Explanation: <i>ka-</i> (reduplikasi) = will / plan <i>bukas</i> = tomorrow

Based on this explanation, it can be seen that the verb element of Indonesian sentences does not undergo any changes at all, even though the time adverbs differ. In Indonesian, tense changes are only made by adding time adverbs, such as now, yesterday, and yesterday. There are also challenges in the effectiveness of sentences due to misuse in informal and formal situations. This was conveyed by the following participant.

I often call you a teacher, hehe. But that's not quite right. (P6)

In Visayan language everything is the same, there is no such thing as Aku-Saya. (P7)

Many students often refer to older people as "you," and "she" as "he" in the third person they're talking about. They're accustomed to using fixed pronouns (pronouns that don't change). (G2)

Based on this explanation, in terms of sentence effectiveness, errors often occur in the use of formal and informal language levels, as well as standard and non-standard words (Ginting, 2020). This can lead to incomprehensible messages due to cultural differences and language level rules in certain situations. The following is a contrastive analysis of the differences between informal and formal language levels in sentences in Indonesian, Visayan, and Tagalog.

Table 4. Language Levels

No.	Informal-Formal Language Levels		
	Indonesian	Visayan language	Tagalog language
1.	Aku-Saya (I)	<i>Ako</i>	<i>Ako-Ako po</i>
2.	Kamu-Anda (You)	<i>Ikaw-Kamo</i>	<i>Ikaw- Kayo po</i>
3.	Dia-Beliau (He/She)	<i>Siya</i>	<i>Siya- Siya po</i>

Based on this explanation, there are clear differences in the use of word structures and language levels. Through contrastive analysis with presentations of first language (L1) and second language (L2), learners will be better able to cognitively map and differentiate language systems, in line with the contrastive analysis hypothesis and cognitive theory, which states that learning a new language is more effective when connected to linguistic knowledge already stored in memory (Salleh & Yusof, 2021).

Furthermore, based on the results of interviews and data analysis, it can be concluded that the language barriers experienced by BIPA diaspora children learners in Mindanao, Philippines are in line with the findings of Amala and Asteria, (2024) regarding language errors in second language learners. These obstacles include difficulties in sentence structure, tense usage, language levels, and choice of greetings. Field findings indicate that inaccuracy in choosing formal and informal varieties is a clear manifestation of the differences in linguistic systems between Indonesian and Visayan and Tagalog languages.

Furthermore, these findings also reinforce research by Holovatenko (2025) particularly in terms of syntactic structure, sentence effectiveness, code-mixing, ellipsis, and

misunderstandings of word meaning. Thus, it can be asserted that the language barriers experienced by learners are not only structural in nature, but are also influenced by first language interference and the bilingual context surrounding their lives. Therefore, BIPA learning for diaspora children needs to be designed contextually by utilizing a contrastive analysis approach to bridge the differences between languages and minimize language errors more effectively.

Obstacles in Neuropsycholinguistic Perspective

Neuropsychology has a depth of coverage including the integration of memory, language, and attention that affect language ability. The book by Habiburrahman et al. (2025) emphasizes that the three components of memory, language, and attention work simultaneously in shaping the process of understanding and producing language in learners. Therefore, language learning in basic education and BIPA needs to be designed by considering students' cognitive capacity, the use of strategies that support focus of attention, and the presentation of material that helps strengthen memory gradually and meaningfully.

Based on field findings, participants expressed in the following interview excerpts about the language skills constraints of BIPA SID learners when they entered the Davao Indonesian School. The interview instrument was based on a screening of children's language skills according to Pratomo et al. (2018) which explained that the language skills of preschool-early grade children include eight main indicators, namely knowledge related to simple commands, expressive vocabulary, naming colors, answering questions, sentence memory, and digit memory.

Interviews revealed that diaspora children's language skills still show limitations in the receptive and expressive aspects of Indonesian. Students have difficulty understanding simple commands without repetition, have a limited vocabulary and tend to mix languages, and demonstrate minimal question-answering abilities. Furthermore, weaknesses in sentence memory and digit memory indicate suboptimal verbal memory performance in Indonesian, although in certain contexts, such as memorizing songs, it appears to improve. These findings suggest that limited language exposure and the dominance of other languages in a children's environment impact the cognitive and functional development of Indonesian language skills.

The findings of limited language skills in diaspora children can be explained through the perspective of linguistic neuropsychology. Linguistic neuropsychology views language as the result of integrated work between working memory, long-term memory, and the brain's executive functions (Luria) (Habiburrahman et al., 2025; Muliana et al., 2025). Difficulty understanding simple commands and answering questions indicates suboptimal language processing in the receptive pathway (Munfarokhah, 2020). Limited expressive vocabulary and language mixing indicate weak lexical representation of Indonesian in semantic memory (Natalia, 2023). This phenomenon, when viewed from a linguistic perspective, is related to the influence of the environmental language (L1/L2) on Indonesian as the target language, as explained in language contact theory and contrastive analysis.

The study of language comprehension processes from a psycholinguistic analysis is related to neuroscience. Psycholinguistic analysis of the human brain explains the types of language disorders including aphasia, dysphasia, apraxia, agrammatism, and anomia (Muliana et al., 2025). Language disorders in the psycholinguistics of the human brain are understood as the result of disruption of the brain's nervous system that regulates language comprehension, production, and planning (Nurisra et al., 2026). Aphasia, apraxia, agrammatism, and anomia reflect damage to certain areas or brain networks that play a role in speech production, syntactic processing, and lexical access, while dysphasia is related to language development disorders in children (Miftahudin et al., 2025). Language disorders

include aphasia due to brain injury, including Broca's aphasia (difficulty speaking) and Wernicke's aphasia (difficulty understanding language), dysphasia, a language development disorder in children, apraxia, a difficulty pronouncing words, agrammatism, characterized by weak sentence structures, and anomia, characterized by difficulty naming objects or people (Miftahudin et al., 2025). Thus, language disorders are understood as the result of impaired brain function that plays a role in understanding and producing language. Therefore, language disorders need to be distinguished from language difficulties influenced by impaired brain function, the environment, or everyday language use. Language barriers of Indonesian diaspora children in Mindanao can be concluded from a neuropsycholinguistic perspective as agrammatism, characterized by weak sentence structures due to minimal environment/exposure to Indonesian in everyday life.

The language comprehension stage is closely related to the brain structures involved in language processing. The language comprehension stage for elementary learners includes vocabulary recognition (lexical), understanding simple sentence structures (syntax), and interpreting utterances or sentences (semantics) (Muliana et al., 2025). This language comprehension involves the coordination of brain areas involved in processing sound, meaning, and language structure, particularly Wernicke's area, Broca's area, and the temporal lobe (Habiburrahman et al., 2025). Research by Pliatsikas (2020) explains that changes in brain structure resulting from bilingual experience are dynamic and depend on the intensity of language use. Bilingualism plays a role in improving executive functions, especially attention control and cognitive management (Bialystok, 2015). Executive functions in neurocognitive studies include self-efficacy regulation, inhibition, working memory, and cognitive flexibility. Executive control develops as a child ages. It is an important factor in academic readiness (Hadia & Batubara, 2025). However, among diaspora children in Mindanao living in a Visayas-Tagalog-English-Indonesian environment, the intensity of exposure to multiple languages can also lead to cognitive overload. Simultaneous activation of multiple languages increases demands on working memory and executive control, so, rather than facilitating, this condition can hinder the process of mastering Indonesian (BIPA), especially in the early stages of learning. Thus, multilingualism in this context is dynamic: on the one hand, it can strengthen executive function, but on the other hand, it can increase cognitive load, hindering comprehension and production of the target language. Thus, language learning needs to be designed according to the learner's level of language understanding, especially at the basic level, by paying attention to vocabulary development, simple sentence structures, and the gradual development of meaning in utterances.

Based on this, this study combines empirical data on the language skills of diaspora children with a neuropsychological-linguistic approach. This study describes the forms of language barriers and their causes from the perspective of brain function and language systems, while also offering more applicable pedagogical implications for Indonesian language learning. Overall, the research findings indicate that limitations in diaspora children's language skills are closely related to neurolinguistic factors, the influence of their first language and environment, and limited exposure to Indonesian. An in-depth study of language barriers from the perspectives of neuropsychological and linguistic theories is considered to help teachers process, differentiate, and strengthen the cognitive language learning system. Therefore, Indonesian language learning for diaspora children needs to be consciously designed, structured, and grounded in an understanding of brain function and language.

Conclusion

Research findings indicate that Indonesian diaspora children in Mindanao, Philippines, experience language barriers in the form of difficulty constructing Indonesian sentences due to differences in syntactic structure and grammatical systems with Visayas and Tagalog, especially in the construction of phrases and the use of time markers. The influence of the first language is also evident through code mixing, resulting in less consistent use of Indonesian. The limitations of language skills from a neuropsycholinguistic perspective are related to the stage of children's elementary language understanding, which includes vocabulary recognition, understanding simple sentences, and interpreting utterances, which are influenced by brain function, the language environment, and low exposure to Indonesian.

These findings imply that Indonesian language learning for diaspora children needs to be designed in a structured and gradual manner, adapting to their cognitive development, language system, and language comprehension levels. This research was limited to elementary-level diaspora children in a specific region and did not directly involve empirical neurolinguistic data.

Recommendation

It is recommended that further research involve a wider range of subjects and employ a broader methodological approach to deepen the study of the relationship between brain function, language acquisition, and Indonesian language learning, as well as to develop learning models for diaspora children that are appropriate to the neurocognitive characteristics and sociocultural backgrounds of the students. Furthermore, it is necessary to collaborate between schools (SID) and parents to strengthen long-term memory in children through consistent use of Indonesian at home, as well as in the environment (school and SID dormitory), such as daily communication, reading together, and vocabulary practice to support the encoding and retrieval process and reduce attrition in children's language in a multilingual environment.

References

- Aji Pratomo, H. T., Siswanto, A., & Purnaningrum, W. D. (2018). Skrining Kemampuan Bahasa Anak Pra Sekolah : A Pilot Project. *Jurnal Keterampilan Fisik*, 3(1), 25–34. <https://doi.org/10.37341/jkf.v3i1.105>
- Amala, A. A., & Asteria, V. P. (2024). Problematika Budaya Komunikasi dalam Pembelajaran BIPA pada Pembelajar Korea Selatan: Kajian Pembelajaran Bahasa Kedua. *Bapala*, 11(02), 233–245. <https://ejournal.unesa.ac.id/index.php/bapala/article/view/61581>
- Ardiansyah, R., & Harjanti, F. D. (2023). Pola Pelepasan Dalam Konstruksi Kalimat Berbahasa Indonesia Sebagai Bahasa Ketiga Pemelajar Bipa. *BELAJAR BAHASA: Jurnal Ilmiah Program Studi Pendidikan Bahasa Dan Sastra Indonesia*, 8(1), 97–108. <https://doi.org/10.32528/bb.v8i1.640>
- Bialystok, E. (2015). Bilingualism and the Development of Executive Function: The Role of Attention. *Child Development Perspectives*, 9(2), 117–121. <https://doi.org/10.1111/cdep.12116>
- Bialystok, E. (2017). The bilingual adaptation: How minds accommodate experience. *Psychological Bulletin*, 143(3), 233–262. <https://doi.org/10.1037/bul0000099>
- Binaan, W., & Kuripan, K. (2024). 5 12345. 4(1), 1–6.
- Darihastining, S., Mislikhah, S., & Fauzi, N. B. (2018). Problematika Pembelajaran Bipa: Analisis Kesalahan Berbahasa Pada Pesan Sms Ekspatriat Pt Cheal Jedang Indonesia.

- Sastra Dan Perkembangan Media*, 2, 900.
- DeLuca, V., Rothman, J., Bialystok, E., & Pliatsikas, C. (2019). Redefining bilingualism as a spectrum of experiences that differentially affects brain structure and function. *Proceedings of the National Academy of Sciences*, 116(15), 7565–7574. <https://doi.org/10.1073/pnas.1811513116>
- Ginting, L. S. D. B. (2020). *AKBI-Analisis Kesalahan Berbahasa Indonesia*. Guepedia.
- Habiburrahman, L., Yulia, N. M., Hapsari, A. R., Jaswandi, L., Rabia, S. F., & Afiani, K. D. A., ... & Rahmasari, D. (2025). *Neuropsikologi Pendidikan Dasar : Integrasi Memori , Bahasa , Perhatian dan Teknologi dalam Membangun Pengetahuan Akademik*.
- Hadia, H., & Batubara, M. H. (2025). Hubungan Bahasa, Pikiran, dan Otak: Analisis Psikolinguistik dalam Konteks Pendidikan Bahasa. *Cognitive Insight in Education*, 1(2), 128–141. <https://doi.org/10.64850/cognitive.v1i2.128>
- Holovatenko, T. (2025). Digital Gamification in Times of Crisis. In *Transforming Language Education Through Mobile Technology Integration* (pp. 189–218). IGI Global Scientific Publishing. <https://doi.org/10.4018/979-8-3373-3366-3.ch007>
- Izzah, N., Tiara Riski, Y., & Suprpto, Y. (2025). Fostering reading literacy in transnational education: Practices and challenges at Indonesian overseas schools in the Philippines. *EduStream: Jurnal Pendidikan Dasar*, 9(2), 141–157. <https://doi.org/10.26740/eds.v9n2.p141-157>
- Köpke, B., Genevskaya-hanke, D., & Flores, C. M. (2018). *First Language Attrition and Dominance : Same Same or Different ?* 9(November), 1–16. <https://doi.org/10.3389/fpsyg.2018.01963>
- Mariana, N., Riski, Y. T., Gunansyah, G., Suryanti, Huda, M. N., & Lutog, M. J. P. (2026). The Practice of Glocalization in the Motivate Phase of the Learning Model Design for BIPA Diaspora Learners in Mindanao , Philippines. *Tabasa: Jurnal Bahasa, Sastra Indonesia, Dan Pengajarannya*, 07(01), 94–110. <https://doi.org/10.22515/tabasa.v7i01.14487>
- Mickan, A., McQueen, J. M., & Lemhöfer, K. (2019). Bridging the Gap Between Second Language Acquisition Research and Memory Science: The Case of Foreign Language Attrition. *Frontiers in Human Neuroscience*, 13. <https://doi.org/10.3389/fnhum.2019.00397>
- Miftahudin, H., Mualimin, D. R., & Haq, M. E. S. (2025). Neurolinguistics and Psychosociolinguistics. *Journal For Islamic Studies*, 8(4), 1254–1264.
- Muliana, M., Jawilovia, Z., & Fatmawati, F. (2025). Proses Pemahaman Bahasa: Analisis Psikolinguistik Otak Manusia. *Jurnal Penelitian Ilmu-Ilmu Sosial*, 2(6).
- Munfarokhah, I. R. (2020). *Neurosains dalam Mengembangkan Kecerdasan Intelektual Peserta Didik SD Islam Al-Azhar BSD (Doctoral dissertation)*. Institut PTIQ Jakarta.
- Nasrullah, N. (2019). *Pengajaran Bahasa Indonesia Bagi Penutur Asing (BIPA Perspektif Neurospikolinguistik: Menguak Problematika Pengajaran BIPA dan Solusinya*. In *Problematika Pengajaran BIPA* (pp. 100–117).
- Natalia, S. (2023). *Interferensi gramatikal dan leksikal bahasa Indonesia terhadap tuturan bahasa jepang mahasiswa (Doctoral dissertation)*. Universitas Hasanuddin.
- Noor, N. M. (2009). Pengaruh Bahasa dalam Seni Kata Dikir Singapura. *Jurnal Akademik Persatuan Budaya Melayu Program Latihan Khas (Bahasa Ibunda) Institut Pendidikan Nasional*, 9(1), 31.
- Nurisra, H., & Huda, N. (2026). *Gangguan Berbahasa dan Implikasinya Terhadap Proses Kognitif: Studi Psikolinguistik Program Studi Pendidikan Bahasa dan Sastra Indonesia , Universitas Islam Riau*. 3(1), 635–647.

- Nurisra, H., Huda, N., & Fatmawati, F. (2026). Gangguan Berbahasa dan Implikasinya Terhadap Proses Kognitif Studi Psikolinguistik. *Jurnal Research Student*, 3(1), 635–647.
- Pliatsikas, C. (2020). Understanding structural plasticity in the bilingual brain: The Dynamic Restructuring Model. *Bilingualism: Language and Cognition*, 23(2), 459–471. <https://doi.org/10.1017/S1366728919000130>
- Pratiwi, E. Y. R., Nursalim, M., & Sujarwanto, S. (2022). Penerapan Neuropsikologi Terhadap Pemecahan Masalah Perilaku Belajar Siswa Sekolah Dasar. *Jurnal Basiced*, 6(4), 5918-5925.
- Putri, R. G. (2019). Peran Diaspora Indonesia-Filipina Selatan (DIFS) dalam Pemberdayaan Ekonomi Warga Warga Keturunan Indonesia Pemukin (WKIP) di Filipina Selatan. *JISIP-UNJA*, 1(1), 1–9.
- Ridder, H. G. (2014). *Book Review: Qualitative data analysis. A methods sourcebook*.
- Riski, Y. T., Subrata, H., Hendratno, Istiq'faroh, N., Sukartiningsih, W., & Huda, M. N. (2025). The Legend of Gumansalangi in Relation to Literature Learning in Indonesian School of Davao, Philippines. *Jurnal Elementaria Edukasia*, 8(3), 549–558. <https://doi.org/10.31949/jee.v8i3.13615>
- Riski, Y. T., Huda, M. N., Coralde, M. J. C., & Andajani, S. J. (2023). Descriptive Study: Implementation Of Character Education In The Dormitory Of The Indonesian School Of Davao, Philippines. *Metodik Didaktik*, 18(2), 65–74. <https://doi.org/10.17509/md.v18i2.50236>
- Riski, Y. T., Huda, M. N., Gunansyah, G., & Nasution. (2025). Strategies for Indonesian Language Conservation in the Mindanao Diaspora: Educational and cultural identity perspectives at the Indonesian School of Davao, Philippines. *TOFEDU: The Future of Education Journal*, 4(6), 1624–1633. <https://journal.tofedu.or.id/index.php/journal/index>
- Riski, Y. T., Huda, M. N., Purwoko, B., & Gunansyah, G. (2024). Landasan Filosofis Bimbingan Keterampilan Berbahasa Indonesia pada Siswa Sekolah Indonesia Davao Filipina. *AIJER: Algazali International Journal Of Educational Research*, 7(1), 56–63. <http://journal-uim-makassar.ac.id/index.php/AIJER/article/view/1468>
- Rosiya, R. (2020). Pengajaran Bahasa Dan Pemerolehan Bahasa Kedua Dalam Pembelajaran Bipa (Bahasa Indonesia Penutur Asing). *Jurnal Ilmiah KORPUS*, 4(3), 374–382. <https://doi.org/10.33369/jik.v4i3.13839>
- Salleh, N. A. A. M., & Yusof, M. (2021). Analisis Lakuan Bahasa Kontrasif dalam Komunikasi Kumpulan Kecil. *Prosiding*, 135.
- Sufyan, Q. A. Y. (2025). Teori Pemrosesan Informasi oleh Robert M. Gagne. *Ta'liman: Jurnal Pendidikan Guru Madrasah Ibtidaiyah*, 1(2), 75–84.
- Thiagarajan, S., Semmel, D. G., & Semmel, M. I. (1974). Instructional development for training teachers of exceptional children: A sourcebook. *Journal of School Psychology*, 14(1), 75. [https://doi.org/10.1016/0022-4405\(76\)90066-2](https://doi.org/10.1016/0022-4405(76)90066-2)
- Wiratri, A. (2024). Diaspora Indonesia Lintas Laut Sulawesi: Teritori. Kewarganegaraan, Dan Identitas. *Jurnal Masyarakat Indonesia*, 50(1), 163–176. <https://doi.org/10.55981/jmi.2024.8713>
- Yudhawasthi, C. M., Madonna, M., Putri, Y. A., & Maharani, T. (2024). Literasi Kebangsaan dan Bahasa Melalui Kolaboratif Storytelling Bagi Siswa Sekolah Indonesia Davao, Mindanao, Filipina. *Martabe: Jurnal Pengabdian Kepada Masyarakat*, 7(11). <https://doi.org/10.31604/jpm.v7i11.4620-4629>