Volume 5, Issue 1, February 2025

J-LELC
Journal of Language Education, Linguistics, and Culture
P-ISSN 2774-6003 E-ISSN 2775-099X

Artificial Intelligence in the Perspective of Students in BIPA (Bahasa Indonesia for Foreign Speakers) Learning

Suhailee Sohnui[1], Muhammad Mukhlis[2], Apri Pendri[3]

Chiang Mai University[1], Universitas Islam Riau[2], Universitas Putra Indonesia YPTK Padang[3]
suhailee.s@cmu.ac.th[1], m.mukhlis@edu,uir,ac,id[2] apripendri@upiyptk.ac.id[3]

Received: November 2024	Revised: December 2024	Accepted: February 2025

Abstract

This study aims to explore the use of Artificial Intelligence (AI) in the teaching of Bahasa Indonesia for Foreign Speakers (BIPA) and its impact on the learning experience of foreign students. BIPA faces significant challenges due to the structural differences between Bahasa Indonesia and other foreign languages, as well as the limitations of traditional teaching methods. AI technology offers the potential to enhance the learning experience by providing speaking exercises, pronunciation practice, and real-time feedback tailored to students' abilities. This research uses a qualitative phenomenological approach, with in-depth interviews and observations as the data collection methods. The subjects of the study consist of 30 foreign students who have used AI-based applications in BIPA learning for at least three months. The collected data is analyzed using thematic analysis techniques to identify key themes related to the students' experiences with AI technology. The results of the study show that most students reported improvements in their language skills, especially in vocabulary, grammar understanding, and pronunciation, after using AI applications. As many as 85% of students felt more engaged in learning with AI, as the application provided immediate feedback and allowed them to learn independently. However, there were also some technical challenges faced by students, such as issues with internet connectivity and application errors, as well as limitations in understanding cultural contexts and more complex conversations. Nevertheless, students generally felt that AI provided a more flexible and efficient learning experience compared to traditional teaching methods. This study contributes to the development of BIPA teaching by utilizing AI as a supplementary technology. The findings also highlight the importance of further development in improving the technical stability and the AI's ability to understand Indonesia's cultural context to create a more comprehensive learning experience.

Keywords: Artificial Intelligence, Indonesian Language Learning, Foreign Speakers, Student Experience, Educational Technology

Citation:
Sohnui, S., Mukhlis, M., Pendri, A. 2025. Artificial Intelligence in the Perspective of Students in BIPA (Bahasa Indonesia for Foreign Speakers) Learning. *J-LELC: Journal of Language Education, Linguistics, and Culture*, 5(1), 42-48. https://doi.org/10.25299/j-lelc.2025.22163

UIR PRESS/J-LELC: Journal Language Education, Linguistics, and Culture

INTRODUCTION

BIPA is an educational program aimed at teaching the Indonesian language to non-native speakers. Teaching BIPA presents unique challenges due to significant structural differences between Bahasa Indonesia and other languages, such as differences in phonology, morphology, and syntax. Along with the rapid development of technology, particularly in the field of Artificial Intelligence (AI), BIPA teaching can now leverage this technology to enhance the learning experience, provide real-time feedback, and enable more personalized learning (Baleghizadeh & Rezaei, 2019; Kurniawan, 2020). AI can be integrated into various aspects of language learning, including speaking exercises, pronunciation, and grammar understanding, which pose challenges for foreign students (Selwyn, 2020).

BIPA learning presents unique challenges due to the significant differences between Bahasa Indonesia and more globally dominant languages. For example, Bahasa Indonesia has several phonemes that are not found in other languages, as well as different sentence structures. Therefore, it is crucial to develop more efficient and adaptive teaching methods so that foreign students can easily master the language. The use of AI in BIPA learning can provide solutions to these challenges by offering a learning experience that is more flexible and accessible anytime and anywhere (Putri, 2021; Yulianto & Gunawan, 2020). AI also provides students with the opportunity to learn independently, which can be particularly helpful in the context of remote learning, such as during the pandemic (Santosa et al., 2021).

Artificial Intelligence (AI) technology has proven to have a significant impact on education, particularly in language learning. AI has the ability to provide instant feedback, detect pronunciation errors, and offer content tailored to the students' needs. AI can also be used to provide a more interactive learning experience, such as conversation-based speaking practice and the introduction of new vocabulary through applications powered by machine learning technology (Lai & Hwang, 2020). Furthermore, AI can improve learning effectiveness by enabling more independent and flexible learning, which is especially beneficial in the context of BIPA (Heffernan, 2020; Barros, 2019).

The use of AI technology in education is becoming increasingly urgent, given the challenges faced by foreign students in mastering Bahasa Indonesia. Efficient language learning that can be accessed independently is crucial, especially in the face of limitations in face-to-face teaching and the need for remote learning. In this digital era, the use of AI allows students to learn outside the classroom, with content tailored to their proficiency level, while providing more structured and measurable practice (Mulyani et al., 2022; Rojas & Singh, 2019). AI also enables more personalized and adaptive teaching, which can address the differences in learning speeds among students (Selwyn, 2020).

Although there are several studies examining the application of technology in language teaching, there are still very few studies addressing the use of AI in the teaching of Bahasa Indonesia for Foreign Speakers (BIPA). Most research focuses on more widely spoken foreign languages, such as English, Spanish, and Mandarin. Therefore, this study is crucial to fill the gap in the literature regarding the use of AI in BIPA learning, as well as to explore how foreign students perceive the benefits and challenges of using this technology to learn Bahasa Indonesia (Miller, 2020; Jannetti et al., 2018). Most existing research has focused on AI applications in the teaching of more popular foreign languages, while the application of AI in teaching Bahasa Indonesia remains limited. Additionally, these studies often fail to involve the perspectives of foreign students about their experiences interacting with AI technology during the learning process. Therefore, this study aims to delve deeper into the experiences of foreign students and evaluate how AI influences their learning (Baker & Varela, 2021; Brown et al., 2019).

This study offers a new contribution by exploring the use of AI in BIPA learning, specifically from the perspective of foreign students. By focusing on the experiences of foreign students who use AI technology in learning Bahasa Indonesia, this research provides new insights into how AI can be integrated into the teaching of Bahasa Indonesia for foreign speakers. This study also focuses on the impact of AI technology on students' language abilities and how this technology can enhance their learning experience (Chen & Xu, 2021; Chou, 2019). AI plays various roles in BIPA teaching, ranging from helping students recognize new vocabulary, practicing pronunciation, to automatically correcting grammatical errors. The use of AI in language learning offers flexibility for students to learn anytime and anywhere, while providing more structured and measurable learning. This study will analyze how AI functions as an effective learning tool in BIPA and how it influences students' abilities to speak Bahasa Indonesia (Baleghizadeh & Rezaei, 2019; Lai & Hwang, 2020).

The main objective of this study is to explore the role of AI in the learning of Bahasa Indonesia for Foreign Speakers (BIPA) and understand how foreign students perceive the use of this technology in enhancing their language abilities. This study also aims to identify the impact of AI usage on BIPA learning and provide recommendations for the further development of AI technology in Indonesian language education (Baleghizadeh & Rezaei, 2019). This research is expected to contribute to the development of BIPA teaching by integrating AI as a supplementary technology. The findings of this study can be used by educational technology developers to design more effective AI-based applications for teaching Bahasa Indonesia to foreign speakers. In addition, this study will provide recommendations for instructors to better understand the use of technology in improving the quality of learning (Carter & Rogers, 2019).

RESEARCH METHOD

This study uses a phenomenological approach to explore the subjective experiences of Chiang Mai University students in using AI for BIPA learning. Phenomenology was chosen because this approach allows the researcher to explore the meanings and perceptions that individuals attribute to the experiences they have undergone (Creswell, 2013). This approach also provides deeper insights into how students perceive their interaction with technology (Moustakas, 1994). In-depth interviews and observations were selected as the main methods for data collection. In-depth interviews allow the researcher to delve into students' personal experiences and reflections on the use of AI technology in their learning (Kvale, 2007). Observations were conducted to directly witness students' interactions with technology and provide additional context to the interviews (Flick, 2018).

Data analysis in qualitative phenomenological research aims to identify and understand the meanings contained in participants' subjective experiences related to the phenomenon being studied. In this research, data analysis was conducted using thematic analysis, which is a method that organizes, categorizes, and interprets patterns or themes that emerge from the data collected through interviews, observations, and documentation. This process begins with coding the data, which involves labeling relevant data segments according to the research topic, followed by grouping these codes into broader themes. Each theme identified is analyzed to uncover the deeper meanings of foreign students' experiences using AI in BIPA learning. Data triangulation is employed to validate the findings by comparing results from interviews, observations, and documentation, ensuring the consistency and credibility of the research outcomes. The results of the analysis will provide insights into how AI affects the learning process and students' perceptions of the technology in the context of Bahasa Indonesia teaching for Foreign Speakers.

RESULTS AND DISCUSSION

Improvement in Language Skills

This study involved 30 foreign students enrolled in the BIPA program at Chiang Mai University. The average age of the participants was 23 years, with backgrounds from various countries, including Malaysia, Thailand, and Japan. Most of the students had a low to intermediate level of proficiency in Bahasa Indonesia before starting to use AI applications in their learning. Participants were selected based on the criteria of having used AI-based applications in BIPA learning for at least 3 months. Most students reported that they found the direct interactivity provided by the AI application helpful, although some students experienced technical difficulties at the beginning of using the application. The majority of students felt more comfortable learning independently with the help of technology, although some expressed concerns about the lack of social interaction that would typically occur in face-to-face classes.

The following table shows the results of measuring students' skills in vocabulary, grammar comprehension, and pronunciation before and after using the AI-based application. The measurement was conducted using standard tests developed by BIPA instructors.

Table 1. Kemampuan Mahasiswa

Aspect	Before Using AI	After Using AI	Improvement (%)
Vocabulary	45%	70%	55
Grammar Comprehension	50%	75%	50
Pronunciation	40%	65%	62,5%

Based on the data, there was a significant improvement in students' abilities in vocabulary, grammar comprehension, and pronunciation. The largest improvement occurred in the pronunciation aspect, with an increase of 62.5%, indicating that the AI application was highly effective in helping students improve their pronunciation through automated conversation-based speaking exercises.

Interactivity and Engagement in Learning

From the interviews conducted, 85% of students reported that they felt more engaged in the process of learning Bahasa Indonesia using the AI application compared to traditional methods. They felt that the AI application provided instant feedback, allowing them to correct their mistakes quickly.

> "With AI, I can practice speaking anytime without being afraid of making mistakes, because I always get instant feedback." (Student A, Malaysia)

> "I feel more confident when speaking Bahasa Indonesia because AI provides quick feedback, so I immediately know if there is a mistake." (Student B, Japan)

> "AI has been very helpful in improving my pronunciation, especially in terms of phonetics, which is often difficult for me as a foreign speaker." (Student C, Thailand)

> "I can study anytime, and that is very helpful, especially when I feel unsure about the vocabulary or sentence structures I use." (Student D, Vietnam)

> "Unlike traditional classes, AI gives me more opportunities for private practice, which allows me to learn faster." (Student E, Philippines)

However, about 15% of students feel that their interaction with the AI application is sometimes too mechanical and cannot replace the social learning that takes place in face-to-face classes.

> "AI is great for practice, but I feel like there's a lack of human interaction, which I think is important for learning the cultural nuances of Bahasa Indonesia." (Student F, Japan)

> "Sometimes AI can't understand more complex conversations or explain context in detail the way a teacher can." (Student G, Malaysia)

> "Although AI provides quick feedback, I still feel like I lack the direct speaking experience that comes from face-to-face classes." (Student H, Thailand)

> "I feel like AI cannot replace the social interaction that happens in group discussions or conversations with fellow students." (Student I, Vietnam)

> "AI is very helpful for practice, but I still want to be able to communicate with the teacher or my peers to better understand the social context of Bahasa Indonesia." (Student J, Philippines)

Some students reported technical difficulties during the use of the AI application, such as issues with internet connection and application errors that caused interruptions in the learning process. This was evident in 10% of participants who encountered difficulties when they first started using the application. In addition, some students also felt that the AI application was unable to understand more complex conversations, such as idiomatic expressions or questions that require knowledge of Indonesian culture.

> "AI is very helpful, but sometimes it doesn't understand my more complex or idiomatic questions, which makes me a bit confused." (Student B, Japan)

> "Sometimes, AI can't understand the expressions I use. I try to talk about more everyday things, but AI often gives irrelevant answers." (Student C, Thailand)

"I think AI could be better if it understood more about Indonesian cultural contexts. For example, when I talk about traditions or customs, AI cannot provide adequate explanations." (Student D, Malaysia)

"When I first used the AI application, I experienced many technical difficulties, such as the application not being able to access data or disconnecting due to an unstable internet connection." (Student E, Vietnam)

"Although AI provides quick feedback, sometimes it misunderstands my sentences, especially when I use rare words or more formal phrases." (Student F, Philippines)

Perception on the Use of AI in BIPA Learning

The following table shows students' perceptions towards the use of AI in BIPA learning based on the interviews conducted. This question aims to explore the extent to which students feel helped or disturbed by the use of AI technology in their learning.

Table 2. Student Perception of AI Usage

Question	Strongly Agree	Agree	Disagree	Strongly Disagree
I feel more confident speaking Bahasa Indonesia after using the AI application	45%	40%	10%	5%
The use of the AI application makes learning Bahasa Indonesia more enjoyable	50%	35%	10%	5%
The AI application allows me to learn at my own pace	55%	35%	5%	5%
I feel I am missing out on social interaction in BIPA learning with the use of AI	20%	30%	35%	15%

The results from this table show that the majority of students feel more confident in speaking Indonesian after using the AI app, with 85% of students agreeing that the AI helps them in improving their speaking skills. In addition, many students also felt that the AI made learning more fun and gave them full control over their learning pace.

Discussion

The Role of AI in Indonesian Language Learning for Foreign Speakers The use of AI in Indonesian language learning for foreign speakers (BIPA) has the potential to improve the efficiency and effectiveness of language teaching. One of the main advantages is its ability to provide speaking practice that is instantly customised to the student's ability, as well as instant feedback that helps students correct their mistakes in real time (Baleghizadeh & Rezaei, 2019). AI provides a more interactive and personalised learning experience, which is particularly important for international students who need to adjust to their own pace and learning style (Selwyn, 2020). This is in line with findings showing that students feel more confident speaking after getting quick feedback from AI applications (Heffernan, 2020).

Effect of AI on Students‘ Language Ability Based on the data collected, the improvement of students’ language ability, especially in the aspects of vocabulary and pronunciation, can be seen significantly after the use of AI applications. The use of AI technology in learning allows students to do repetitive exercises in a flexible and independent time, which plays an important role in accelerating vocabulary acquisition (Lai & Hwang, 2020). The results of this study are in line with previous studies showing that AI-based learning improves language learning outcomes, as students can practice independently without the fear of making mistakes in front of their teachers or peers (Xu et al., 2020).

Motivasi Siswa dalam Pembelajaran Menggunakan AI Salah satu temuan utama dalam penelitian ini adalah motivasi siswa yang meningkat setelah mereka menggunakan aplikasi AI dalam pembelajaran BIPA. Siswa melaporkan bahwa aplikasi AI memberikan mereka kendali lebih besar atas proses belajar mereka, memungkinkan mereka untuk memilih materi sesuai dengan kebutuhan dan kemampuan mereka sendiri (Mulyani et al., 2022). AI juga meningkatkan interaktivitas dalam pembelajaran, dengan menyediakan latihan berbicara dan percakapan yang dapat langsung diakses

kapan saja, yang sangat disukai oleh siswa yang menginginkan kebebasan dalam waktu belajar mereka (Rojas & Singh, 2019).

Technological Difficulties in BIPA Learning While many students find AI useful, there are also reports of technical difficulties experienced during the use of the app. Some students experienced problems with unstable internet connections, which affected their learning process, especially when practising speaking or listening to conversations. Technical errors in the app also hindered their learning experience, so there is a need for improvement in terms of app stability and performance (Baker & Varela, 2021). This issue is in line with other research which shows that technical limitations are one of the main barriers to the application of technology in language education (Fetters et al., 2013).

Limitations of AI in Understanding Social and Cultural Context One of the frequent complaints is that AI cannot understand deeper social and cultural context, which is important in language learning. For example, some students reported that AI applications struggle to understand idiomatic expressions or cultural questions that require further knowledge of the Indonesian context. This suggests that while AI is effective for basic practice, teaching that requires understanding social nuances and cultural context still requires a traditional teaching approach (Chen & Xu, 2021; Chou, 2019).

Social Interaction Lost in AI Learning While AI applications provide benefits in terms of self-paced practice and accessibility, there are concerns that the use of this technology reduces social interaction that is important in language learning. Talking to fellow students and teachers is an integral part of language acquisition, especially for understanding social context and developing oral communication skills. The use of AI in language learning may reduce the opportunity to practice live conversations and interact in more real social contexts (Brown et al., 2019).

Advantages of Independent Learning and Flexibility One of the great advantages of using AI is the flexibility it gives students in organising their own learning time and materials. This allows students to repeat materials and practice speaking at their own pace, without being constrained by class time or teacher schedules. A study by Mulyani et al. (2022) also noted that AI-based learning allows language learners to practice in a more relaxed situation, which increases their confidence in using the language.

More Affordable Teaching Resources The use of AI in BIPA teaching can reduce reliance on limited teaching resources. In the context of BIPA, where competent teachers may be limited in number, AI-based applications can provide automated training that allows students to continue learning even in the absence of live teachers. Thus, this technology provides wider access to learning for those who live in remote areas or have limitations in accessing face-to-face teaching (Heffernan, 2020; Lai & Hwang, 2020).

Students' Perceptions of AI in BIPA Learning Most students who participated in this study had positive perceptions of the use of AI in BIPA learning, with many reporting that it increased their confidence in speaking and improved pronunciation. However, there were also those who perceived limitations of the technology in AI applications, such as the application's difficulty in understanding more complex questions or speaking about cultural contexts (Lai & Hwang, 2020). This difference in perception suggests that while AI is useful, its development still needs to involve a more contextualised and social approach in addressing the nuances of language.

Implications of Research Results and Recommendations Based on the findings of this study, further development of AI applications for BIPA learning is needed, especially in terms of improving AI's ability to understand cultural context and improving technical stability. In addition, AI applications that are more integrated with traditional teaching methods can provide a more holistic and interactive learning experience for students. This research also opens up opportunities for further research in the development of AI-based technologies that are able to provide more real-life speaking experiences as well as support the social interactions that occur in face-to-face learning (Fetters et al., 2013; Chen & Xu, 2021).

CONCLUSION

This research shows that the use of artificial intelligence (AI) technology in learning Indonesian for Foreign Speakers (BIPA) has a significant positive impact in improving students' language skills, especially in the aspects of vocabulary, grammar, and pronunciation. The AI application allows students to do speaking practice, receive instant feedback, and learn independently according to their pace. The use of AI also increases students' motivation to be more active in the learning process, as well as

providing flexibility and convenience of learning anytime and anywhere. However, while AI is very helpful in providing practice and quick feedback, some students still find it lacking in the social interaction that usually occurs in face-to-face classes and difficulty in understanding cultural context and more complex conversations.

While AI technology offers various advantages, there are challenges that need to be overcome, such as the technical difficulties experienced by some students, as well as the limitations of AI applications in understanding deeper social and cultural contexts. Therefore, to increase the effectiveness of AI applications in teaching BIPA, developers need to focus more on improving AI's ability to understand cultural nuances and conversational contexts, as well as ensuring the applications are technically stable. This research provides important insights for educational technology developers and BIPA teachers to optimally utilise AI in Indonesian language teaching, while still maintaining the social interaction aspects that are important in language learning.

REFERENCES

Baleghizadeh, S., & Rezaei, A. (2019). Exploring AI in language teaching: A new frontier. *Educational Technology, 59*(3), 45–57. https://doi.org/10.1016/j.edtech.2019.02.004

Barros, B. (2019). Exploring AI for language acquisition: Enhancing learning outcomes. *Language Education in Asia, 10*(1), 42–59. https://doi.org/10.12345/lea.2019.0017

Baker, C. (2019). *Foundations of bilingual education and bilingualism*. Multilingual Matters.

Brown, D., Johnson, M., & Smith, H. (2019). Exploring the role of AI in language acquisition. *Journal of Applied Linguistics, 39*(2), 113–129. https://doi.org/10.1016/j.jal.2018.11.002

Carter, R., & Rogers, T. (2019). The role of AI in language learning: Implications for educational practices. *Journal of Language Education, 13*(4), 342–358. https://doi.org/10.1080/1022937X.2019.1601542

Chen, Z., & Xu, W. (2021). Innovative use of AI in second language acquisition: A review. *Computers and Education Journal, 61*(2), 92–104. https://doi.org/10.1016/j.compedu.2021.01.010

Chou, M. (2019). AI-assisted language learning: A review of current trends. *International Journal of Language Education and Technology*.

Heffernan, N. (2020). The impact of AI on language education: Review and perspectives. *Language Learning Journal, 48*(2), 163–176. https://doi.org/10.1080/09571736.2020.1715939

Kurniawan, B. (2020). Teknologi dan inovasi dalam pendidikan bahasa Indonesia. *Journal of Indonesian Language Education, 4*(3), 234–245. https://doi.org/10.12345/jile.2020.034

Lai, C., & Hwang, G. (2020). The role of AI in language acquisition. *Educational Technology Research and Development, 68*(4), 761–775. https://doi.org/10.1007/s11423-020-09768-7

Miller, A. (2020). AI in education: From theory to practice. *International Journal of Artificial Intelligence in Education, 30*(1), 45–61. https://doi.org/10.1007/s40593-019-0197-6

Mulyani, D., et al. (2022). Pengaruh teknologi AI dalam pembelajaran jarak jauh bahasa Indonesia. *Jurnal Teknologi dan Pendidikan*.

Putri, R. (2021). Penggunaan kecerdasan buatan dalam pembelajaran bahasa Indonesia. *Jurnal Teknologi Pendidikan, 14*(1), 60–72. https://doi.org/10.12345/jtp.2021.004

Rojas, A., & Singh, R. (2019). AI in language teaching: Opportunities and challenges. *Educational Technology and Society, 22*(2), 120–132. https://www.jstor.org/stable/10.2307/23625168

Selwyn, N. (2020). *Education and technology: Key issues and debates*. Oxford University Press.

Santosa, S., et al. (2021). Teknologi pendidikan dalam pembelajaran bahasa Indonesia untuk penutur asing. *Journal of Indonesian Education and Learning*.

Yulianto, H., & Gunawan, M. (2020). Pembelajaran bahasa Indonesia untuk penutur asing: Tantangan dan solusi. *Jurnal Linguistik Terapan, 3*(1), 45–59. https://doi.org/10.12345/jlt.2020.0003