# Beyond Motivation: Students' Perception of Ethical and Learning-related Risks of AI-Driven Gamified Language Learning

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**ABSTRACT**

The use of artificial intelligence (AI) and gamification in language learning has garnered significant attention as these technologies are being increasingly integrated in higher education. Numerous studies have shown that their application in the language learning increases students' motivation, engagement and learning outcomes. However, in addition to the positive results, it is crucial to closely examine the potential drawbacks of AI and gamification, particularly their ethical and educational implications. This research employed a quantitative research method to explore students' perceptions of these issues. A total number of 212 undergraduate students at a public university in Hanoi, Vietnam were invited to participate in a structured survey. The responses were analyzed using basic descriptive statistics to gather their opinions about the ethical and learning-related risks of applying AI-driven gamified tools in the language learning process. The result revealed that students expressed critical concerns about data privacy and surveillance, stress caused by competitive elements, shallow motivation, and reduced social interaction. These issues call for more ethical design of AI-driven gamified tools, enhanced institutional guidance, and improved digital literacy education. These shifts are essential to ensure that AI and gamification play a supporting role without unintentionally harming students' language learning experience.

**Keywords**: Artificial Intelligence (AI), Gamification, Ethical risks, Learning-related risks

## Introduction

### *Motivation and Gamification in Language Learning*

In recent years, the application of AI and gamification has become a powerful approach with an aim to boost student motivation in language learning classes (Deterding et al., 2011; Su & Cheng, 2015; Öztürk & Korkmaz, 2020; Kapp, 2012; Jaiswal, 2024; Akarsu, 2015; Tida, 2024)

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According to Ryan and Deci (2000, p.69), "motivation has been a central and perennial issue in the field of psychology". It is a critical factor in sustaining learners' interest and persistence, particularly in challenging tasks. It includes intrinsic motivation, which "comes from within" (Muntean, 2011), and extrinsic motivation, "where an outside incentive stimulates the user to pursue the activity" (Zichermann, 2011). They play the role of influencing a learner's willingness and effort to engage in language learning. A thorough understanding of motivation and reinforcement reveals that both extrinsic and intrinsic reinforcement play a role in ensuring engagement and learning in a gamified environment (Koutropoulos & Porter, 2020). Extrinsic motivation can serve as a tool to spark a learner's curiosity in a task that may initially seem unimportant to them at the beginning of the learning process. Additionally, it can help motivate learners to engage in tasks they might find dull in the beginning (Kapp, 2012). Moreover, external incentives can enhance the enjoyment of completing tasks, direct focus toward specific objectives, and create a more immediate sense of time investment in a given activity (Kapp et al., 2014).

Gamification, built by adding elements such as leaderboards, points, badges to create an environment which is like in games for the learners so it can attract them and produce effective and motivational learning experience (Tida, 2024), has been proved to help increase both intrinsic motivation and learning outcomes (Bai et al., 2020; Buckley & Doyle, 2016; Chapman & Rich, 2018). However, many games applied in language teaching are merely "shallow gamification", which is described as "a thin layer of gamification, where the core teaching and learning processes are not substantially changed" and has little impact on motivation (Mozelius, 2021, p.3153). Mozelius and Hülser (2021) explored the differences between shallow gamification and deep gamification, claiming that deeper motivation, which can boost students' intrinsic motivation, requires deliberate preparation and more implementation efforts than shallow gamification.

Overall, integrating gamification into language teaching and learning requires a substantial investment in preparation and implementation. Without careful planning and executing, the outcomes may be negligible or even counterproductive for learners.

### *AI-driven Gamification in Language Learning*

Learning a foreign language is considered a dominant skill in the 21st century (Wu et al., 2024). In today's highly competitive world, language proficiency is a valuable asset which can enhance individuals' competitiveness and provide higher chance of achieving professional success (Khosrawi-Rad et al., 2025)

AI in language learning typically incorporates features such as smart tutoring systems, automated feedback, and natural language processing; when combined with gamification strategies, these systems promote continuous engagement and motivation (Hamari et al., 2014). These strategies have been successfully applied in language-learning applications, such as Babbel and Duolingo, which are used by millions of users worldwide. In addition, Madden et al. (2025) showed that Kahoot! helped improve vocabulary, grammar, pronunciation and culture. In spite the fact that some students experienced anxiety, most felt motivated. In Le's study (2024), Kahoot! and Quizlet were identified as positively supporting students' English vocabulary learning. However, although they are advantageous to users in some ways, they may also cause stress and pose risks to data privacy. Ethical concerns are increasing as AI systems process vast amounts of user data. Furthermore, some addictive game elements, such as points, badges, and leaderboards, may cause people to prioritize rewards over acquiring knowledge. Studies have highlighted the risk of "surface learning" resulting from a focus on rewards rather than genuine understanding (Nicholson, 2015). Therefore, there is a need for further research

to explore the use of AI gamification in education to minimize potential risks and consequences.

Current literature largely emphasizes the benefits of AI and gamification; however, this study examines the negative effects of using AI and gamification in education. It focuses on how AI and gamification might impact student privacy, as well as students' interactions with their teachers and peers. It also examines how AI may impact the way students think, socialize, and learn independently. Ethical issues, such as data privacy, algorithmic bias, and surveillance, as well as learning-related risks, including shallow motivation and over-competition, need deeper investigation (Selwyn, 2019; Knox, 2020).

While AI and gamification offer numerous educational benefits, it is essential to critically examine their ethical and pedagogical implications. This study does not oppose the use of AI in language learning environments; rather, it aims to investigate students' perceptions of potential risks, such as data privacy, algorithmic bias, surveillance, shallow motivation, and reduced social interaction. By going beyond motivation, the research explores students' awareness and concerns about how these technologies affect their learning experience, autonomy, and interpersonal connections.

## Literature Review

### *Related studies*

AI and gamification have significantly contributed to the increase in learners' motivation and learning performance. However, despite the promising outcomes, educators and researchers have begun to question the ethical and pedagogical risks and have conducted research to thoroughly examine the problems (Srimathi & Anitha, 2025).

Regarding the "dark sides" of AI-driven gamification, a number of researchers have shown interest in this field. The study by Mogavi et al. (2022) found that gamified features in Duolingo, such as leaderboards and points, could prevent learners from achieving genuine engagement and lead to shallow motivation. Users reported experiencing reduced learning effectiveness, compulsive behavior, and increased stress. The findings indicated common causes of gamification downsides, including competitiveness, as well as the ethical and cognitive implications of this misuse. The authors concluded that practical design should be deployed to help reduce the risk of gamification misuse in educational apps. Additionally, Salmanova (2025) examined the potential downsides of AI-driven gamification in language education. Although the motivational benefits were acknowledged, several significant drawbacks were also highlighted, including cognitive overload from excessive game elements and the risk of superficial learning that focused more on rewards than on comprehension. The study also raised concerns about learners becoming overly dependent on AI-generated feedback, which may hinder their critical thinking abilities and communication skills. The paper emphasized that AI systems frequently lacked cultural nuance and emotional intelligence, resulting in unnatural language use. Besides, ethical concerns such as data privacy, algorithmic bias, and educational commercialization were emphasized. According to Al-Zahrani (2024), the use of AI in education brought not only benefits but also several serious problems. His study was a literature review and a survey of 260 university students. The results revealed issues including reduced human interaction, data privacy risks, algorithmic bias, and a lack of transparency in AI systems. Al-Zahrani also warned that students' critical thinking skills could be affected when they overuse AI. Additionally, he emphasized that enhancing transparency in AI design could help address multiple issues and urged the need for ethical and fair use of AI in education. Andrade et al. (2016) investigated both positive and negative sides of gamification in language

learning. Despite the fact that it can contribute to the engagement in learning process, it can also lead to problems such as addiction, stress, prioritizing rewards over real knowledge. The authors suggested that educators need to design gamification in a way that maximizes the benefits and minimizes the harmful effects.

In terms of perceptions of this issue, several notable studies have been conducted. Alenezi (2023) explored teachers' views on AI-driven gamification and identified several implementation challenges despite its motivational effects. Teachers reported frequent technical issues, insufficient training, and difficulties aligning AI features with curricular goals. Both educators and students experience frustration while encountering the disrupted learning process caused by these obstacles. The study also emphasized a lack of clear evidence on the long-term effectiveness of such systems as well as questioned their sustainability and educational value. Additionally, teachers expressed concern about its impact on the reduced depth of learning and indicated a need for a more cautious application of AI tools to prevent unintended negative consequences. Pitts et al. (2025) investigated students' opinions about the use of AI-powered chatbots. The study was a thematic analysis conducted at a large public university in the United States. Responses from 262 undergraduate students were analyzed to get final results. Besides several benefits of AI, such as personalized feedback, study support, and easier access to information, concerns about academic integrity, reduced critical thinking, overreliance on technology, misinformation, and ethical issues, including data privacy, algorithmic bias, and environmental impact, have also been acknowledged. One of the notable worries was the difficulty in distinguishing between AI-generated and human-generated work. Some students wondered that genuine efforts might be mistaken with AI products. The study by Samanta et al. (2024) examined the views of 5 students on the use of gamification in education. According to the participants, they experienced increased engagement and motivation, as well as critical thinking. However, they also reported some drawbacks, such as technical problems, reduced communication and interaction, competitiveness, and distractions from learning goals. At the conclusion of this qualitative study, the authors suggested that while gamification offered benefits, thoughtful implementation was essential to avoid negative effects.

Considering the rapid global integration of AI and gamification into language education, the amount of research on students' perceptions of AI-driven gamification in language learning remains limited, especially regarding its negative influences on learners. In the Vietnamese context, many students have been aware of and raise concerns about this issue; however, little attention has been paid. Therefore, further studies should be conducted to investigate how Vietnamese students at the higher education level perceive the integration of AI and gamification into language learning, particularly in terms of ethical and educational aspects.

### *Research Questions*

This study aimed to explore tertiary students' opinions about the ethical and pedagogical risks associated with using AI-driven gamification for language learning. To achieve this goal, the study addressed the following research questions:

Question 1: How do university students perceive the ethical risks related to AI-driven gamified language learning?

Question 2: What are university students' concerns regarding the educational and psychological impacts of these tools?

## Methods

### *Research Design*

This study employs a quantitative descriptive research design to systematically investigate students' opinions about the ethical and learning-related risks of artificial intelligence in gamified language learning environments. This approach is particularly utilized for gathering general views across a large number of participants.

### *Instrument*

In this study, a structured questionnaire was used as the research instrument in order to collect relevant data. Prior to the main data collection, a pilot study involving 60 students was conducted to test the appropriateness of the questionnaire items. The final version of the questionnaire consisted of 26 items. Among them, 24 items were rated on a five-point Likert scale (ranging from "Strongly Agree" to "Strongly Disagree") to assess students' levels of agreement with various statements. One item was designed to collect information on the participants' gender, and one item focused on self-reported digital literacy levels. The questionnaire covered three domains: personal information and digital literacy levels, ethical concerns including data privacy, transparency, and surveillance, and learning-related risks involving stress, motivation, social interaction, and critical reflection.

### *Data Collection and Analysis*

To enable convenience and accessibility for participants, Google Forms were used to collect data. The survey was conducted in both English and Vietnamese to ensure students fully understood the content.

The data were then processed using SPSS software. Basic descriptive statistical methods, including means and standard deviations, were employed to summarize the participants' responses.

### *Participants*

The participants consisted of 212 undergraduate students, comprising 170 females and 42 males, from a public university in Hanoi, Vietnam. All of them were attending an English language course from Year 2 to Year 4, making them suitable participants for the study.

The process of choosing participants is as follows. Three English teachers, each in charge of a different year level, were asked to help deliver surveys to their students. They explained the purpose of the study to their students, helped them understand it, and instructed them to complete the survey. There were 8 classes with a total of 237 students; however, only 212 students participated in the survey.

## Findings

Participants' proficiency in using AI-driven Gamified language learning is rated on a scale of 1 (Very low) to 5 (Very high). This question was asked to assess students' experience with AI-driven, gamified learning platforms. As shown in Figure 1 below, the students have rather good ability in using the platforms (74% with high proficiency, 14% with very high proficiency, and 12% with moderate proficiency).

*Figure 1*

*Gender and Proficiency in using AI-powered gamified language learning*

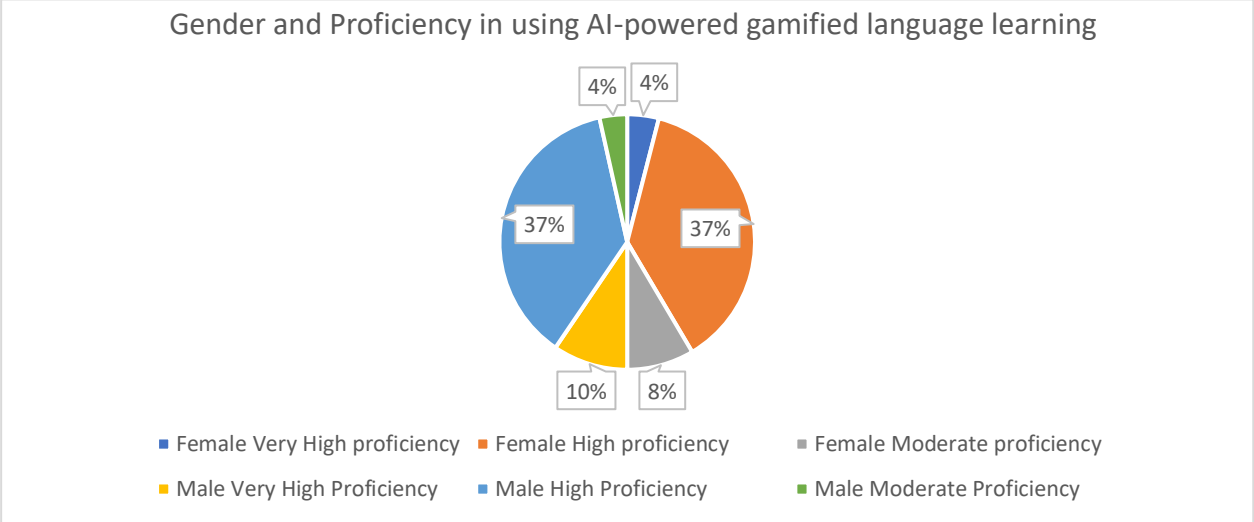


*Table 1*

*Ethical Risks*

| ***Items*** | ***Mean*** | ***Std. Deviation*** |
|---|---|---|
| **A. Data Privacy** | | |
| I am concerned that my personal data may be collected without my full consent. | 3.7143 | 0.64365 |
| I worry that AI-powered gamified language platforms may misuse my personal data. | 3.7619 | 0.53896 |
| I am concerned that my data might be shared with third parties without my knowledge. | 3.9048 | 0.62488 |
| I believe more information should be provided about how my data is stored and protected. | 4.0476 | 0.58959 |
| **B. Transparency** | | |
| I find it difficult to understand how the AI decides which content or feedback to provide. | 3.8095 | 0.60159 |
| I think the goals and rules of the gamified learning system are not clearly explained. | 3.8571 | 0.65465 |
| I am unsure if the feedback I receive is generated by fair and unbiased algorithms. | 3.619 | 0.49761 |
| I believe AI systems in language learning should be more transparent in how they function. | 4.2381 | 0.43644 |
| **C. Surveillance** | | |
| I feel uncomfortable knowing that the platform continuously tracks my progress and behavior. | 3.7143 | 0.46291 |
| I am concerned that my performance data is being monitored in ways I don't fully understand. | 3.5714 | 0.50709 |
| I worry that my mistakes or learning patterns could be permanently stored or used inappropriately. | 3.5238 | 0.51177 |

Table 1 presents the findings on 212 students' perceptions of ethical risks associated with the use of AI-powered, gamified language learning platforms, specifically in terms of transparency, data privacy, and surveillance.

Data privacy is a major concern, as evidenced by the findings of four items in Section *A* of the survey. The first two items "*I am concerned that my personal data may be collected without my full consent*" and "*I worry that AI-powered gamified language platforms may misuse my personal data*" show that majority of the asked students worry that their personal data may be collected without their full consent (M = 3.71, SD = 0.64), or misused by the platform (M = 3.76, SD = 0.54). The concern about their data being shared with third parties without their knowledge, surveyed in the third statement, is obvious (M = 3.90, SD = 0.62). Additionally, in the last component in this part, students strongly agree that more information should be provided about how their data is stored and protected (M = 4.05, SD = 0.59).

Transparency issues are further emphasized in the next four survey components in Section *B, particularly the transparency* of the questionnaire. The highest-rated item overall is the belief that AI systems in language learning should be more transparent in their functioning (M = 4.24, SD = 0.44). Students also struggle to understand how AI decides what content or feedback to provide (M = 3.81, SD = 0.60) and feel the goals and rules of these platforms are unclear (M = 3.86, SD = 0.65). There is uncertainty surrounding whether the feedback they receive is fair and unbiased (M + 3.62, SD = 0.50).

Concerns about surveillance are also examined through three statements in Section C, *"Surveillance*." First, students report discomfort knowing that the platform tracks their progress and behavior (M = 3.71, SD = 0.46). The next item, "*I am concerned that my performance data is being monitored in ways I don't fully understand,*" expresses concern about their performance being used for purposes they cannot control (M = 3.5714, SD = 0.50709). Last, students worry that mistakes or learning patterns could be permanently stored or misused (M = 3.52, SD = 0.51).

From the analyzed results with low standard deviations, it is evident that students do care about and broadly agree on the need for more ethical, transparent, and respectful AI systems in education.

The results in Table 2 reveal students' insights into the educational risks associated with using gamified language platforms. There are 13 survey items divided into four sections: *Stress, Superficial Motivation and Motivation Conflict, Reduced Social Interaction, and Critical Reflection.*

Regarding Stress, many students express that the experience can be overwhelming. For instance, the statement *"I feel under pressure because my progress is constantly tracked"* has a rating of 3.85 (SD = 0.38), indicating strong agreement. Students also find the competitive nature of the platform more stressful than encouraging (M = 3.85, SD = 0.38). Students' fear of failing goals set by the platform is reflected in the item "*I feel anxious when I fail to meet the goals set by the platform"* (M = 3.53, SD = 0.51). Additionally, they experience a loss of encouragement when outplayed by their peers in games (M = 3.77, SD = 0.72).

In the area of Superficial Motivation and Motivation Conflict, there are 4 surveyed issues. The obstacle *"I focus more on earning badges or rewards than truly understanding the language content"* demonstrates students' feelings of prioritizing incentives over real knowledge achievement (M=3.53, SD=0.52). The response of being encouraged to finish tasks quickly rather than carefully (M = 3.69, SD = 0.48), suggests that gamified features may reduce students' learning quality. The highest concern is about self-doubt caused by the app's

performance tracking, with a mean of 4.08 (SD = 0.49). Additionally, AI and gamification can also cause students to feel discouraged about their overall language performance, resulting in poor outcomes (M = 3.7, SD = 0.5).

*Table 2*

*Learning-related concerns*

| *Items* | *Mean* | *Std. Deviation* |
|---|---|---|
| **A. Stress** | | |
| I feel anxious when I fail to meet the goals set by the platform. | 3.5385 | 0.51887 |
| I feel under pressure because my progress is constantly tracked. | 3.8462 | 0.37553 |
| I find the competitive features more stressful than motivating. | 3.8462 | 0.37553 |
| I feel discouraged when I see other users progressing faster than me. | 3.7692 | 0.72501 |
| **B. Superficial Motivation and Motivation Conflict** | | |
| I focus more on earning badges or rewards than truly understanding the language content. | 3.6154 | 0.50637 |
| The gamified features encourage me to complete tasks quickly rather than carefully. | 3.6923 | 0.48038 |
| When I perform poorly, I feel discouraged about my overall ability to learn languages. | 3.8462 | 0.5547 |
| The app's way of measuring my progress makes me question my abilities, even when I understand the content. | 4.0769 | 0.49355 |
| **C. Reduced Social Interaction** | | |
| These tools limit my opportunities to receive genuine human feedback or guidance, and interact with teachers or peers. | 3.6923 | 0.48038 |
| I find it hard to express confusion or ask for clarification, which affects my learning effectiveness. | 3.9231 | 0.76955 |
| **D. Critical Reflection** | | |
| Gamification makes it harder for me to reflect on what I've truly learned. | 4.1538 | 0.37553 |
| I feel that I learn less deeply than I would in a traditional classroom setting. | 3.8462 | 0.37553 |
| Game-like features of gamified apps encourage me to rush through the tasks rather than think critically. | 3.7692 | 0.43853 |

In terms of Reduced Social Interaction, students report that these platforms limit their chances to interact with others or ask for help, with one item scoring 3.92 (SD = 0.77). The result of the item aligns with the next question, showing high agreement that they find it hard to seek help to clarify their knowledge when needed (M=3.92, SD=0.77).

Finally, under Critical Reflection, students express concern that gamification interferes with deep thinking and true understanding (M = 4.15, SD = 0.38), indicating a strong belief that the format may hinder reflective learning. Many students admit that they prefer a traditional learning environment when it comes to the ability to deeply understand the knowledge (M = 3.84, SD = 0.38). Lastly, game features are reported to affect learners' critical thinking as they race to complete the tasks (M = 3.77, SD = 0.44).

Overall, the findings indicate that students draw attention to learning-related issues related to the use of AI and gamification in the educational environment. Additionally, low standard

deviations indicate that they share a high level of agreement on these problems.

## Discussion

The findings of this study support previous research on the negative effects of AI-powered gamified learning. While AI and gamification have undeniable motivational value, they also bring about ethical and pedagogical concerns. Students are not passive consumers. Many of them are aware of the challenges and are critically engaging with the tools they are expected to use. The results aim to contribute to urge administrators and educators to take into consideration the design and application of AI and gamification to protect learners' rights and learning experiences.

The concern over ethical risks was obvious. Data privacy received a lot of students' attention; a result aligned with that of Al-Zahrani (2024) and Pitts et al. (2025). The lack of transparency in AI feedback highlights the need for more interpretable models and effective user education. The emotional toll of competitive gamification mechanisms indicates that motivation must be carefully managed to avoid counterproductive stress.

Many students reported feeling stressed due to being tracked and participating in competitions all the time, a finding similar to those of Mogavi et al. (2022) and Andrade et al. (2016), who found that gamified features can increase pressure and reduce motivation. Many students also paid more attention to earning rewards than gaining knowledge, which may lead to shallow learning. The same result was noted in the studies of Salmanova (2025) and Andrade et al. (2016).

A major concern was the reduction in human-to-human interaction. Learners felt they had fewer chances to ask for help or discuss problems with teachers and peers. Similarly, Al-Zahrani (2024), Salmanova (2025), and Samanta et al. (2024) expressed concern that AI was lowering the quality of social communication. In addition, students felt that gamified systems made it harder to reflect on what they learned, encouraging fast performance over deep thinking.

The findings suggest that we need to be more thoughtful about how we utilize AI and games in language learning. Although gamification and AI have been proven to be beneficial to students, the results indicate that poorly designed AI-driven gamification may unintentionally harm students. Therefore, improvements should be considered to ensure that these purposes are served ethically. Ethical design ensures that game mechanics do not manipulate students' and learners' data, and that their privacy is protected. Additionally, the balanced use of AI-driven, gamified learning language should not be overlooked. Institutions must establish clear rules and monitor how these tools are used to meet not only educational goals but also ethical standards. Additionally, many students should have the right to understand how their data is used. Together, these elements support a more responsible, transparent, and learner-centered approach to the use of AI in education.

## Conclusion and limitations

This study was conducted solely at a single public university in Hanoi, with a sample size of 212 students, which presents a significant limitation in terms of the generalizability of the findings. Since every university has its own system, students, and teaching methods, the findings from this research may not accurately reflect what happens in other schools, either in Vietnam or in other countries. Future research should incorporate diverse populations and

employ mixed methods to gain a deeper understanding of the impact and sustainability of such learning tools.

This study demonstrates that although language learning through gamification tools integrated with AI holds many attractive potential benefits, it also presents several challenges. Students understand the benefits that AI can bring to learning, but they also recognize the risks related to ethics and learning quality when using these technologies. The results showed that learners were aware of issues such as data privacy, learning quality, and mental health. These concerns are legitimate, and measures need to be taken to balance the benefits and risks brought by AI. Authorities and educational institutions need to be more responsible in applying technology in education to avoid harmful effects on learners. It is necessary to reorient the use of AI through the development of clear regulations from the outset of gamification design. In addition, it is necessary to support students in developing digital skills, as technology can serve learning effectively without compromising ethics or mental health. AI and gamification should be used to support teachers, rather than replace them entirely. The ideal combination is one where AI provides personalized lessons, quick feedback, and engaging activities, while teachers offer emotional support, cultural understanding, and facilitate real-life communication. As AI tools are predicted to evolve, it is crucial to utilize them in a thoughtful and equitable manner. When used correctly, these tools can not only help learners improve their language skills through technology but also prepare them to communicate confidently in real-life situations and cross-cultural environments.

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## Biodata

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