Alibbaa': Jurnal Pendidikan Bahasa Arab
Special Issue Vol. 01 2026
P-ISSN: 2721-1606 | E-ISSN: 2716-4985
doi: https://doi.org/10.19105/ajpba.vi.24012

Rethinking AI in Arabic Translation Learning: The Role of DeepL and Teacher Mediation

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Abstract

This study aims to analyze the implementation of DeepL AI Translate in Arabic translation learning at MTs Alkhairaat Pusat Palu Indonesia, examine its impact on students' learning processes, and identify the role of teachers in controlling the quality of AI-assisted translations. This research employs a qualitative descriptive approach within a naturalistic framework, with data collected through 15 days of classroom observations, in-depth interviews, and documentation. The findings reveal that DeepL is integrated into a structured learning process consisting of pre-translation, AI-assisted translation, post-translation, and evaluation stages. The use of DeepL enhances student participation, learning efficiency, confidence, and vocabulary comprehension. However, its use remains largely limited to lexical-level support and may lead to dependency if not pedagogically controlled. In this context, teachers play a crucial role as mediators, facilitators, and quality controllers of translation outcomes. This study highlights that the effectiveness of AI in language learning depends not only on technological capability but also on its pedagogical integration within the classroom.

Keywords: *DeepL, Arabic translation learning, artificial intelligence, teacher role, cognitive scaffolding*

Abstrak

Penelitian ini bertujuan untuk menganalisis implementasi DeepL AI Translate dalam pembelajaran penerjemahan bahasa Arab di MTs Alkhairaat Pusat Palu, mengkaji dampaknya terhadap proses pembelajaran

siswa, serta mengidentifikasi peran guru dalam mengontrol kualitas terjemahan berbasis AI. Penelitian ini menggunakan pendekatan kualitatif deskriptif dalam kerangka naturalistik dengan teknik pengumpulan data berupa observasi selama 15 hari, wawancara mendalam, dan dokumentasi. Hasil penelitian menunjukkan bahwa penggunaan DeepL diintegrasikan secara terstruktur melalui tahapan pra-penerjemahan, penerjemahan berbantuan AI, pasca-penerjemahan, dan evaluasi. Penggunaan DeepL terbukti meningkatkan partisipasi siswa, efisiensi waktu belajar, kepercayaan diri, serta membantu pemahaman kosakata. Namun, pemanfaatannya masih cenderung terbatas pada level leksikal dan berpotensi menimbulkan ketergantungan jika tidak dikontrol secara pedagogis. Dalam konteks ini, guru berperan penting sebagai mediator, fasilitator, dan pengontrol kualitas terjemahan. Penelitian ini menegaskan bahwa efektivitas penggunaan AI dalam pembelajaran tidak hanya ditentukan oleh kecanggihan teknologi, tetapi oleh bagaimana teknologi tersebut diintegrasikan dalam kerangka pedagogis yang terarah.

Kata Kunci: *DeepL, pembelajaran terjemahan bahasa Arab, kecerdasan buatan, peran guru, scaffolding kognitif*

Introduction

Arabic translation learning at the *madrasah tsanawiyah* level (equivalent to lower secondary education) constitutes a complex cognitive activity that requires not only vocabulary mastery but also the ability to understand linguistic structures, contextual meanings, and the cultural nuances embedded within texts.[1] However, in practice, translation instruction continues to be dominated by conventional approaches that rely heavily on dictionary use and linear meaning retrieval.[2] This process is often time-consuming, imposes a significant cognitive load on students, and results in low levels of engagement. Consequently, students frequently struggle to comprehend texts holistically, tend to remain passive during learning activities, and lack confidence in presenting their translation outcomes.

[1] Afriati, Intan, Zuhir Ratmansyah, Ardiman Fadhil, and Yudistira Iriandi Lesmana. "Grammar and Translation Methods in Arabic Language Learning: Theory and Practice." *MADINA : Journal of Islamic Studies* 2, no. 1 (June 2025): 1–8. https://doi.org/10.62945/madina.v2i1.741.

[2] A. Gazali, Nihayatur Rahmah, Roychan Yasin, Muhammad Ridwan, and Alya Raihana Sari. "Arabic for Specific Purposes in Islamic Higher Education: Systemic Learning Challenges among Non-Pesantren Students." *Alibbaa': Jurnal Pendidikan Bahasa Arab* 7, no. 1 (February 2026): 370–91. https://doi.org/10.19105/ajpba.v7i1.23592.

In this context, the emergence of Artificial Intelligence (AI)-based technologies, particularly machine translation tools such as DeepL, offers transformative potential for language learning.[3] Unlike conventional methods, AI systems are capable of producing relatively fast, accurate, and contextually appropriate translations through neural network-based natural language processing. This capability enables students to access textual meaning more efficiently, reduces initial barriers in vocabulary comprehension, and creates opportunities for more active engagement in the learning process. Thus, AI functions not merely as a technical aid but also as a form of cognitive scaffolding that supports more effective meaning construction.[4]

Nevertheless, the integration of AI into translation learning is accompanied by a number of pedagogical dilemmas that warrant critical attention. On the one hand, AI enhances efficiency and reduces students' initial cognitive load. On the other hand, uncontrolled use of AI may lead to dependency and the phenomenon of cognitive offloading, whereby students tend to delegate their thinking processes to technology.[5] This condition may result in superficial language understanding, diminished analytical abilities, and weakened interpretive skills in comprehending texts at a deeper level. Therefore, AI should not be viewed solely as a facilitator of learning but also as a potential source of cognitive disruption if not integrated within an appropriate pedagogical framework. In the context of Arabic translation learning at the *madrasah tsanawiyah* level (lower secondary education), including at MTs Alkhairaat Pusat Palu, this issue becomes particularly relevant given that students are still in the developmental stage of foundational language skills and thus require guided support in utilizing technology effectively.

A number of previous studies have examined the use of artificial intelligence in language learning, particularly in the context of translation, by highlighting both its potential and limitations. A study conducted by Polakova and Klimova demonstrates that the use of DeepL as a neural machine translation tool can enhance language proficiency

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[3] Hidalgo-Ternero, Carlos Manuel. "Google Translate vs. DeepL." *MonTI. Monografías de Traducción e Interpretación*, January 13, 2021, 154–77. https://doi.org/10.6035/MonTI.2020.ne6.5.

[4] Kuddus, Khushboo. "Artificial Intelligence in Language Learning: Practices and Prospects." In *Advanced Analytics and Deep Learning Models*, 1–17. Wiley, 2022. https://doi.org/10.1002/9781119792437.ch1.

[5] Jesudas, Roseline. "Empowering Language Learning: The Role of AI in Enhancing Language Skills." 2025, 050023. https://doi.org/10.1063/5.0278362.

and foster positive student perceptions of the learning process, particularly when it is purposefully integrated into learning activities.[6] These findings suggest that AI holds significant potential in improving both the efficiency and quality of language learning. However, other studies indicate that such advantages are not without limitations. Alkhatnai argues that although AI is capable of producing fast and relatively accurate translations, it still faces challenges in capturing idiomatic meanings, cultural nuances, and more complex contextual elements, thereby requiring human intervention in the interpretive process.[7] This limitation is further supported by Gao et al., who found that AI-based translation systems, including DeepL, remain limited in preserving symbolic meaning and linguistic aesthetics, particularly in texts characterized by semantic complexity.[8]

From the user perspective, Abdelhalim et al. report that students generally exhibit positive perceptions of AI-assisted translation, particularly in terms of ease of use, speed, and increased confidence. However, such confidence is often accompanied by a tendency to rely heavily on machine-generated translations without engaging in deeper analytical processes.[9] From a pedagogical standpoint, Nugroho et al. emphasize that teachers play a crucial role in guiding the use of AI in language learning, particularly in preventing potential misuse and ensuring that technology is employed productively.[10] Nevertheless, most

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[6] Polakova, Petra, and Blanka Klimova. "Using DeepL Translator in Learning English as an Applied Foreign Language – An Empirical Pilot Study." *Heliyon* 9, no. 8 (August 2023): e18595. https://doi.org/10.1016/j.heliyon.2023.e18595.

[7] Alkhatnai, Mubarak. "The Role of Artificial Intelligence Tools in Mediating Sino-Arab Cultural Exchanges through Intercultural Translation." *Babel. Revue Internationale de La Traduction / International Journal of Translation / Revista Internacional de Traducción* 71, no. 6 (October 2025): 740–69. https://doi.org/10.1075/babel.25101.alk.

[8] Gao, Ruiyao, Yumeng Lin, Nan Zhao, and Zhenguang G. Cai. "Machine Translation of Chinese Classical Poetry: A Comparison among ChatGPT, Google Translate, and DeepL Translator." *Humanities and Social Sciences Communications* 11, no. 1 (June 2024): 835. https://doi.org/10.1057/s41599-024-03363-0.

[9] Abdelhalim, Safaa M., Asma A. Alsahil, and Zainab A. Alsuhaibani. "Artificial Intelligence Tools and Literary Translation: A Comparative Investigation of ChatGPT and Google Translate from Novice and Advanced EFL Student Translators' Perspectives." *Cogent Arts & Humanities* 12, no. 1 (December 2025). https://doi.org/10.1080/23311983.2025.2508031.

[10] Nugroho, Arif, Nur Hidayanto Pancoro Setyo Putro, Kastam Syamsi, Ira Mutiaraningrum, and Fitriya Dessi Wulandari. "Teacher's Experience Using ChatGPT

of these studies tend to focus on technological effectiveness, user perceptions, or system limitations in isolation, and have not comprehensively examined how AI is integrated into actual classroom practices, nor how interactions among technology, students, and teachers unfold within a structured pedagogical framework.

Furthermore, studies specifically examining the use of DeepL in Arabic translation learning at the secondary education level, particularly within *madrasah tsanawiyah* (lower secondary education), remain limited and have yet to provide insights grounded in real classroom practices. This gap indicates both a conceptual and empirical deficiency in AI-based language learning research, especially in studies that simultaneously integrate technological, pedagogical, and teacher-related dimensions. Therefore, this study seeks to address this gap by analyzing the implementation of DeepL AI Translate in Arabic translation learning within a structured pedagogical framework, while positioning the teacher as a mediator and quality controller in AI-assisted learning processes. In doing so, this study aims not only to contribute empirically but also to enrich the conceptual framework of AI integration in Arabic language learning.

Based on the above considerations, this study aims to analyze the implementation of DeepL AI Translate in Arabic translation learning at MTs Alkhairaat Pusat Palu, examine its impact on students' learning processes, and identify the role of teachers in controlling the quality of AI-assisted translations. Accordingly, the research questions are formulated as follows: (1) how is DeepL AI Translate implemented in Arabic translation learning, (2) what is its impact on students' learning processes, and (3) what is the role of teachers in controlling the quality of AI-based translations.

Method

This study employed a qualitative descriptive design within a naturalistic inquiry framework to examine the use of DeepL Translate AI in Arabic translation learning at MTs Alkhairaat Pusat Palu. The naturalistic approach was chosen to capture the learning process as it occurs in its real classroom context without any experimental manipulation or intervention. This design allows for an in-depth

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understanding of how AI is integrated into pedagogical practices and how it influences student learning dynamics.

The research was conducted at MTs Alkhairaat Pusat Palu, with participants consisting of Arabic language teachers and students who were actively involved in the use of DeepL Translate during the learning process. Participants were selected using purposive sampling to ensure that the data obtained were relevant to the research objectives and reflected authentic classroom experiences.

Data were collected through multiple techniques, including classroom observations, semi-structured interviews, and documentation. Observations were conducted over a period of 15 days to identify patterns of AI integration, student interaction with the technology, and the teacher's role in guiding the learning process. Semi-structured interviews were used to explore participants' experiences, perceptions, and challenges related to the use of DeepL Translate. Meanwhile, documentation, such as students' translation outputs and learning materials, was utilized to support and validate the findings.

Data analysis followed the interactive model proposed by Miles, Huberman, and Saldaña, which includes data reduction, data display, and conclusion drawing. Data reduction was carried out by selecting and organizing relevant data related to AI usage in translation learning. Data display was presented in a narrative form to illustrate patterns of interaction among students, teachers, and technology. Conclusions were drawn iteratively by identifying relationships and patterns across the data.[11]

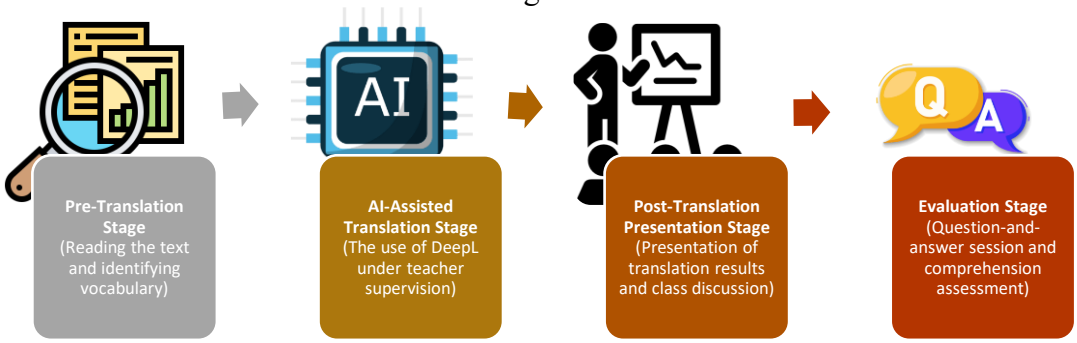
To ensure the trustworthiness of the findings, this study applied triangulation of sources, methods, and time. In addition, peer checking and audit trails were employed to enhance the credibility and dependability of the data analysis process. Through these procedures, the study provides a systematic and reliable account of AI integration in Arabic translation learning within a real classroom context.

[11] Matthew B. Miles, A. Michael Huberman, and Johnny Saldaña. *Qualitative Data Analysis: A Methods Sourcebook*. 3rd ed. Thousand Oaks, CA: SAGE Publications, 2014.

Results and Discussion

Implementation of DeepL

The findings indicate that the use of DeepL Translate in Arabic translation learning at MTs Alkhairaat Pusat Palu is not positioned as a primary tool, but rather as a supporting tool integrated within a structured learning framework under the teacher's supervision. The learning process is carried out through several interconnected stages, beginning with the pre-translation stage, followed by AI-assisted translation, post-translation, and evaluation. During the pre-translation stage, students are first required to read the Arabic text independently without the assistance of technology, identify unfamiliar vocabulary, and attempt to comprehend the meaning of the text based on their prior knowledge. This stage is intended to establish students' initial cognitive engagement before the introduction of technological assistance.



In the AI-assisted translation stage, students began to use DeepL Translate in a limited and guided manner to translate specific parts of the text, such as words, phrases, or sentences perceived as difficult. The use of AI at this stage was not entirely unrestricted; rather, it was carried out under the teacher's supervision, with clear guidance regarding which parts should be translated and how the translation output should be critically interpreted. Students were also encouraged to compare DeepL-generated translations with their initial understanding, ensuring that the learning process did not rely solely on instant results but continued to involve cognitive processing and reflection.

During the post-translation stage, students were asked to present their translation results in front of the class, followed by discussion sessions and feedback from both peers and the teacher. This stage facilitated a process of meaning negotiation through the comparison of various translation alternatives, enabling students to develop a deeper understanding of differences in meaning, sentence structure, and

contextual language use. The teacher played an active role in providing corrections, clarifying misunderstandings, and reinforcing students' comprehension of accurate meanings.

The final stage was evaluation, in which the teacher posed oral questions to assess students' understanding of the translated text. The evaluation focused not only on the final translation product but also on the extent to which students comprehended the content and were able to articulate its meaning. Overall, the implementation of DeepL in this learning context demonstrates that technology is not used freely, but is positioned as a form of scaffolding within the learning process, while maintaining students' cognitive engagement as the central focus.

The Impact of DeepL on Students' Learning Process

Based on observations conducted over 15 days of classroom learning, the use of DeepL Translate demonstrated a noticeable shift in student engagement. In the initial sessions prior to the structured use of AI, most students appeared passive when assigned translation tasks. They tended to wait for further instructions from the teacher, and some were observed lowering their heads while consulting dictionaries without actively attempting to understand the text as a whole. Interaction among students was also limited, with only a few individuals willing to present their translations when prompted by the teacher.

However, after DeepL was introduced in a structured manner, observable behavioral changes began to emerge. In subsequent sessions, students showed greater initiative in attempting to understand the text independently before class discussions began. The texts used in the lessons generally consisted of simple narrative and descriptive Arabic texts, containing everyday vocabulary but also featuring syntactic structures that posed challenges for *madrasah tsanawiyah* (lower secondary education) students, such as verbal sentence constructions (*jumlah fi'liyah*), derived verb forms, and context-dependent expressions that cannot always be interpreted literally. In this context, students no longer relied solely on teacher explanations, but began to actively translate specific parts of the text, particularly difficult vocabulary and phrases, with the assistance of DeepL.

This activity gradually evolved into more dynamic student interactions, as they engaged in discussions to compare their translation outputs with their initial interpretations. The classroom environment became more interactive, as indicated by the increasing number of students volunteering to present their translations and the emergence of peer discussions questioning differences in meaning produced by DeepL.

In some instances, students were also observed discussing the distinction between literal translations and contextually appropriate meanings, reflecting a deeper level of cognitive engagement compared to the pre-AI learning phase.

In addition, changes were also observed in the way students responded to assigned tasks. Initially, students tended to hesitate and frequently responded with "I don't know." However, after using DeepL, they became more willing to provide answers, even when those answers were not entirely accurate. They demonstrated a greater willingness to take risks, as evidenced by their readiness to read their translation results in front of the class without being directly appointed by the teacher. These observational findings were supported by interview data with the teacher, who noted that students became more confident in attempting translations because they had already developed an initial understanding through DeepL, thereby reducing their fear of making mistakes.

From the perspective of time efficiency, the observations revealed a noticeable change in the process of searching for vocabulary meanings during translation activities. In the early sessions, when students relied primarily on printed dictionaries, most were seen taking turns consulting them, looking up meanings word by word, and often pausing for extended periods just to identify a single appropriate meaning. In some cases, students appeared confused when selecting the correct meaning, as a single word could have multiple possible interpretations. This condition slowed down the learning process and frequently delayed classroom discussions. However, after the introduction of DeepL, this process became significantly faster. Students simply entered a word or a segment of a sentence into the application and immediately obtained translation results that served as an initial reference.

This shift was evident in the reduced pauses in student activity and the more rapid transition from meaning-searching to discussion stages. The teacher was also observed facilitating more student-to-student interaction rather than delivering lengthy explanations, as most students already possessed a preliminary understanding of the text. This finding was further supported by observations of classroom time allocation, which showed that more time was devoted to discussing the content of the text rather than individually searching for word meanings.

In terms of confidence, the observations indicated a clear change in students' behavior when responding to translation presentation tasks. Initially, only a few students were willing to read their translations aloud,

while the majority tended to avoid participation or refused when called upon by the teacher. However, once DeepL became integrated into the learning process, the number of students willing to present gradually increased. This was reflected in students voluntarily raising their hands to read their translations, as well as a reduction in hesitant behaviors such as prolonged silence or seeking assistance from peers when asked to explain the meaning of a text. Some students were also observed reading their translations more fluently, although minor errors still occurred and were subsequently addressed during classroom discussions.

Interview data with students further revealed that they felt more confident because they were able to review their translations using DeepL before presenting them in class. In addition, documentation in the form of students' notes showed that they began to record revised translations after participating in discussions, indicating active engagement in reflective learning processes. These findings suggest that DeepL not only supports cognitive aspects of learning but also plays a role in reducing student anxiety and fostering greater willingness to participate in classroom activities.

The Role of the Teacher in DeepL-Assisted Translation Learning

Based on observations conducted throughout the learning process, the role of the teacher in the use of DeepL Translate extends beyond that of a content deliverer, and is more prominently manifested as a central agent who regulates how the technology is utilized by students. In the initial stages of instruction, the teacher explicitly imposed limitations on the use of DeepL, such as prohibiting students from translating entire texts directly and instead directing them to focus only on specific sections deemed difficult. These instructions were reiterated across multiple sessions, and the teacher actively moved around the classroom to ensure that students did not overuse the tool. In several instances, the teacher was observed admonishing students who copied translation outputs without prior comprehension, while encouraging them to reread the source text before relying on AI assistance.

In addition, the teacher functioned as a facilitator in guiding students to critically interpret the translations generated by DeepL. This was particularly evident during class discussions, where the teacher refrained from immediately providing correct answers and instead prompted students to compare their own translations with those produced by DeepL. In some cases, the teacher posed follow-up questions such as "Does this meaning align with the context of the sentence?" or "Is there

another possible interpretation?", thereby encouraging students not to accept AI-generated translations uncritically. Through this approach, the teacher implicitly cultivated students' critical awareness toward AI-based translation outputs.

The teacher's role as an evaluator was also clearly evident in the process of reviewing students' translation work. Observational data indicate that after students presented their translations, the teacher provided feedback that extended beyond correctness, addressing aspects such as meaning, sentence structure, and contextual appropriateness. On several occasions, the teacher highlighted the differences between literal translations generated by DeepL and more contextually accurate interpretations, enabling students to recognize the limitations of the technology. This process was further supported by documentation in the form of students' notes, which showed evidence of revised translations following teacher feedback.

Furthermore, interview data with the teacher revealed that DeepL was perceived as a supportive tool that must be pedagogically regulated to prevent student dependency. The teacher acknowledged that without proper supervision, students tend to rely on DeepL in an instant and superficial manner, bypassing deeper cognitive processing. Therefore, the teacher deliberately designed instructional sequences that required students to first engage with the text independently before using AI, while emphasizing the importance of discussion and reflection after the translation process.

Overall, these findings indicate that the role of the teacher in AI-assisted learning is not diminished, but rather becomes more complex, encompassing functions as a regulator of technology use, a facilitator of cognitive processes, and an evaluator of translation quality. This role is crucial in ensuring that the use of DeepL does not lead to dependency, but instead supports the optimal development of students' language abilities.

Discussion

The findings of this study indicate that the use of DeepL in Arabic translation learning extends beyond technical aspects of translation and significantly influences students' cognitive and affective dynamics. The observed increase in student participation suggests that DeepL functions as a form of *cognitive scaffolding* that helps learners overcome initial barriers in understanding texts.[12] This finding is consistent with Sayed et al., who argue that AI-based technologies can reduce *extraneous cognitive load*, thereby enabling students to focus more effectively on higher-level meaning construction processes.[13] In this context, DeepL not only accelerates access to meaning but also creates opportunities for more active engagement in the learning process.

However, the findings of this study also reveal a tendency for DeepL to be used primarily at a basic functional level, namely as a tool for vocabulary comprehension. This indicates that the potential of AI as a means to support deeper linguistic analysis has not yet been fully utilized by students.[14] This phenomenon is consistent with findings reported by Lin et al., which suggest that the use of translation technologies often remains at a practical level and does not develop into a tool for linguistic reflection.[15] Therefore, although AI enhances efficiency, without appropriate pedagogical intervention, its use may reinforce surface-level learning patterns.[16]

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[12] Hou, Huei-Tse, and Su-Han Keng. "A Dual-Scaffolding Framework Integrating Peer-Scaffolding and Cognitive-Scaffolding for an Augmented Reality-Based Educational Board Game: An Analysis of Learners' Collective Flow State and Collaborative Learning Behavioral Patterns." *Journal of Educational Computing Research* 59, no. 3 (June 2021): 547–73. https://doi.org/10.1177/0735633120969409.

[13] Sayed, Wafaa S., Ahmed M. Noeman, Abdelrahman Abdellatif, Moemen Abdelrazek, Mostafa G. Badawy, Ahmed Hamed, and Samah El-Tantawy. "AI-Based Adaptive Personalized Content Presentation and Exercises Navigation for an Effective and Engaging E-Learning Platform." *Multimedia Tools and Applications* 82, no. 3 (January 2023): 3303–33. https://doi.org/10.1007/s11042-022-13076-8.

[14] Hong, Hui, Poonsri Vate-U-Lan, and Chantana Viriyavejakul. "Generative AI–Mediated Scaffolds for Enhanced Critical Thinking in EFL Writing." *Edelweiss Applied Science and Technology* 9, no. 6 (June 2025): 43–54. https://doi.org/10.55214/25768484.v9i6.7751.

[15] Lin, Chih-Chung, Tzu-Hsuan Lin, and Chi-Kay Tang. "Enhancing English Reading Comprehension, Learning Motivation and Attitude Through <scp>AI</Scp> -Supported Pre-Reading Scaffolding." *Journal of Computer Assisted Learning* 41, no. 6 (December 2025). https://doi.org/10.1111/jcal.70150.

[16] Yu, Miao. "Optimizing EFL Vocabulary Acquisition: A Randomized Controlled Mixed-Methods Investigation of Artificial Intelligence-Driven Incidental,

Furthermore, the observed increase in students' confidence can be analyzed through the lens of the *affective filter hypothesis*, whereby reduced anxiety enables learners to participate more actively in language-related tasks.[17] In this regard, DeepL functions as an initial validation tool that provides a sense of security for students before presenting their translations in front of the class. Nevertheless, this condition requires critical consideration, as reliance on instant technological validation may diminish students' willingness to engage in independent thinking.[18] This suggests an ambivalent relationship between technological support and learner autonomy.[19]

From the perspective of learning efficiency, the use of DeepL has been shown to shift the focus of learning activities from mechanical meaning retrieval to more meaningful discussion and analysis. This finding supports the view that technology can function as a tool for optimizing the allocation of students' cognitive resources.[20] However, such efficiency also introduces the risk of *cognitive offloading*, whereby students tend to delegate part of their thinking processes to technology. If left unregulated, this condition may hinder the development of analytical skills and deeper language comprehension.[21]

In this context, the role of the teacher becomes particularly crucial. The findings indicate that the teacher functions not only as a

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[17] Kundu, Arnab, and Tripti Bej. "AI in School EFL Learning: A Systematic Review of Impact Pathways for Engagement, Achievement, and Satisfaction." *Journal of Language and Education* 11, no. 4 (December 2025): 131–48. https://doi.org/10.17323/jle.2025.22083.

[18] Chen, Yi-chen. "Effects of Technology-Enhanced Language Learning on Reducing EFL Learners' Public Speaking Anxiety." *Computer Assisted Language Learning* 37, no. 4 (May 2024): 789–813. https://doi.org/10.1080/09588221.2022.2055083.

[19] Tai, Tzu-Yu, and Howard Hao-Jan Chen. "The Impact of Google Assistant on Adolescent EFL Learners' Willingness to Communicate." *Interactive Learning Environments* 31, no. 3 (April 2023): 1485–502. https://doi.org/10.1080/10494820.2020.1841801.

[20] Ni, Aohua, and Alan Cheung. "Understanding Secondary Students' Continuance Intention to Adopt AI-Powered Intelligent Tutoring System for English Learning." *Education and Information Technologies* 28, no. 3 (March 2023): 3191–216. https://doi.org/10.1007/s10639-022-11305-z.

[21] Elzerman, Garth H. "When AI Does the Thinking: The Risks of Over-Reliance on Artificial Intelligence in Higher Education Language Learning." *2025 5th International Conference on Artificial Intelligence and Education (ICAIE)*, May 14, 2025, 773–78. https://doi.org/10.1109/ICAIE64856.2025.11158185.

facilitator but also as an *epistemic authority* who determines how technology is utilized within the learning process.[22] This role is reflected in the teacher's strategies to regulate the use of DeepL, encourage students to reflect on translation outputs, and correct errors based on contextual and structural considerations. These findings reinforce the argument proposed by Albadarin that the integration of AI in education cannot be separated from strong pedagogical intervention. Without the teacher's role as a mediator, technology may replace, rather than support, the cognitive processes involved in learning.[23]

Overall, the findings of this study demonstrate that the use of DeepL in Arabic translation learning is inherently ambivalent: on the one hand, it enhances efficiency, participation, and student confidence; on the other hand, it may foster dependency and superficial learning. Therefore, the integration of AI in education must be designed from a pedagogical perspective rather than a purely technological one. Within this framework, this study underscores that the success of AI implementation in learning does not lie in the sophistication of the technology itself, but in how it is integrated into the interaction among teachers, students, and learning materials.

[22] Bonner, Euan, Ryan Lege, and Erin Frazier. "LARGE LANGUAGE MODEL-BASED ARTIFICIAL INTELLIGENCE IN THE LANGUAGE CLASSROOM: PRACTICAL IDEAS FOR TEACHING." *Teaching English With Technology* 2023, no. 1 (2023). https://doi.org/10.56297/BKAM1691/WIEO1749.

[23] Albadarin, Yazid, Mohammed Saqr, Nicolas Pope, and Markku Tukiainen. "A Systematic Literature Review of Empirical Research on ChatGPT in Education." *Discover Education* 3, no. 1 (May 2024): 60. https://doi.org/10.1007/s44217-024-00138-2.

Conclusion

This study demonstrates that the implementation of DeepL AI Translate in Arabic translation learning at MTs Alkhairaat Pusat Palu Indonesia is carried out in a structured manner through the stages of pre-translation, AI-assisted translation, post-translation, and evaluation, under active teacher supervision. The use of DeepL has been shown to produce positive impacts on the learning process, particularly in enhancing student participation, time efficiency, and confidence. However, its utilization remains largely limited to the lexical level. In this context, the role of the teacher becomes highly crucial as a quality controller, facilitator of cognitive processes, and evaluator of translation outcomes, ensuring that the use of AI does not lead to dependency but instead supports students' cognitive engagement.

Nevertheless, this study has several limitations, particularly its restricted scope to a single institution and the relatively short duration of observation, which may not fully represent the diversity of broader learning contexts. In addition, the study's primary focus on classroom observation has not yet comprehensively explored the long-term development of students' linguistic competence. Therefore, future research is recommended to involve more diverse contexts, adopt longitudinal approaches, and further investigate the integration of AI in developing more complex language skills. At the same time, teachers need to develop adaptive pedagogical strategies to ensure that AI is utilized not merely as an instant support tool, but as a means to strengthen students' analytical and reflective capacities in language learning.

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