



STUDENTS' PERCEPTIONS OF USING DEEPL APPLICATION IN LEARNING ENGLISH AT THE ENGLISH DEPARTMENT OF UNIVERSITAS BHINNEKA PGRI

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ABSTRACT

The increasing integration of artificial intelligence (AI) into English language education has transformed how students engage with translation and academic learning. Among AI-powered translation tools, DeepL has gained attention for its contextual accuracy and natural language output. However, limited studies have explored students' perceptions of its use within Indonesian higher education from a qualitative perspective. This study aimed to investigate English Education students' perceptions of using DeepL in learning English and to identify the challenges they encountered. A descriptive qualitative design was employed involving students from the English Education Department of Universitas Bhinneka PGRI. Data were collected through questionnaires and semi-structured interviews and analyzed using the interactive model of Miles, Huberman, and Saldaña, including data reduction, data display, and conclusion drawing. The findings indicate that students generally hold positive perceptions of DeepL across three dimensions. Cognitively, DeepL is perceived as an effective tool for producing contextually appropriate translations while supporting vocabulary acquisition, grammatical awareness, and academic writing. Affectively, the application enhances learners' confidence and reduces anxiety when completing English-related tasks. Behaviorally, students demonstrate responsible use by reviewing, comparing, and revising translation outputs before incorporating them into academic work. Despite these benefits, several challenges remain, including contextual translation limitations, the risk of excessive dependence, concerns regarding academic integrity, and restricted access to premium features. The study concludes that DeepL can serve as a valuable learning support tool when integrated critically and ethically, complementing rather than replacing students' independent language learning processes.

Keywords: *Artificial Intelligence, DeepL, English Language Learning, Machine Translation, Students' Perceptions.*

ABSTRAK

Perkembangan teknologi kecerdasan buatan (*artificial intelligence/AI*) telah membawa perubahan dalam pembelajaran bahasa Inggris, salah satunya melalui pemanfaatan aplikasi penerjemahan berbasis AI seperti DeepL. Meskipun DeepL dikenal memiliki akurasi dan kualitas terjemahan yang baik, kajian mengenai persepsi mahasiswa terhadap penggunaannya dalam konteks pembelajaran bahasa Inggris di perguruan tinggi Indonesia masih terbatas. Penelitian ini bertujuan untuk mengkaji persepsi mahasiswa terhadap penggunaan aplikasi DeepL dalam pembelajaran bahasa Inggris serta mengidentifikasi berbagai tantangan yang dihadapi selama penggunaannya. Penelitian ini menggunakan pendekatan deskriptif kualitatif dengan melibatkan mahasiswa Program Studi Pendidikan Bahasa Inggris Universitas Bhinneka



PGRI. Data dikumpulkan melalui kuesioner dan wawancara semi-terstruktur, kemudian dianalisis menggunakan model analisis interaktif Miles, Huberman, dan Saldaña yang meliputi reduksi data, penyajian data, serta penarikan kesimpulan. Hasil penelitian menunjukkan bahwa mahasiswa memiliki persepsi positif terhadap penggunaan DeepL. Secara kognitif, DeepL dinilai membantu menghasilkan terjemahan yang akurat, memperkaya kosakata, meningkatkan pemahaman tata bahasa, serta mendukung kegiatan akademik. Secara afektif, penggunaan DeepL meningkatkan rasa percaya diri mahasiswa dalam menyelesaikan tugas berbahasa Inggris. Secara perilaku, mahasiswa memanfaatkan DeepL secara kritis dengan meninjau dan merevisi hasil terjemahan sebelum digunakan. Meskipun demikian, masih ditemukan beberapa kendala, seperti keterbatasan penerjemahan pada konteks tertentu, potensi ketergantungan, isu integritas akademik, dan keterbatasan fitur pada versi gratis. Dengan demikian, DeepL dapat menjadi media pendukung pembelajaran bahasa Inggris yang efektif apabila digunakan secara kritis, etis, dan tetap diimbangi dengan upaya belajar secara mandiri.

Kata Kunci: *DeepL, Kecerdasan Buatan, Pembelajaran Bahasa Inggris, Penerjemahan Mesin, Persepsi Mahasiswa.*

INTRODUCTION

The rapid advancement of artificial intelligence (AI) has significantly transformed educational practices, particularly in English as a Foreign Language (EFL) learning. AI-powered applications provide learners with immediate feedback, personalized learning experiences, and flexible access to language resources, enabling them to develop language skills beyond conventional classroom settings (Choirul Huda & Roistika, 2025; Rusmiyanto et al., 2023; Wei, 2023; Yeslyamov, 2024). As digital technology becomes increasingly integrated into higher education, English language learning is no longer limited to textbooks and classroom interaction but is supported by various intelligent applications that facilitate reading, writing, translating, and communication (Hidayat, 2024; Maspul, 2024).

In Indonesia, English remains a foreign language, creating considerable challenges for university students, particularly in mastering vocabulary, grammar, academic writing, and reading comprehension (Prima & Hartono, 2025). Many students experience difficulties in interpreting academic texts, constructing grammatically appropriate sentences, and expressing ideas accurately in English. These challenges often reduce learners' confidence and hinder their academic performance. Consequently, integrating educational technology has become an important strategy for supporting English language acquisition by providing accessible learning resources and encouraging learner autonomy (Maspul, 2024; Yeslyamov, 2024).

Among various AI-assisted technologies, machine translation has become one of the most frequently utilized learning tools by university students. Unlike conventional translation systems, recent neural machine translation (NMT) technology has substantially improved translation quality by producing context-sensitive and linguistically natural outputs. This development has shifted machine translation from being merely a translation service into a potential educational resource that supports language learning (Liang, 2025; Polakova & Klimova, 2023). Consequently, many English learners employ machine translation not only to understand foreign language texts but also to improve vocabulary knowledge, grammatical awareness, and academic writing performance.

One of the AI-based translation tools that has attracted considerable attention is DeepL Translator. Since its introduction, DeepL has been recognized for generating translations that are more fluent, coherent, and contextually appropriate than many other online translation



applications (Laksana & Komara, 2024). The application employs neural machine translation technology that analyzes complete sentence contexts rather than translating words individually, enabling users to obtain more natural translation outputs. In addition, DeepL provides alternative lexical choices and sentence suggestions, allowing learners to compare expressions and refine their language production (Polakova & Klimova, 2023). Such features indicate that DeepL has the potential to function not only as a translation tool but also as a pedagogical resource supporting English language development.

Recent studies have demonstrated numerous educational benefits associated with DeepL. Students generally perceive the application as an effective medium for understanding complex English texts, completing academic assignments, improving vocabulary mastery, and producing more accurate written work (Laksana & Komara, 2024; Munawwarah & Martriwati, 2024). Similarly, Sidiq and Syafryadin (2024) reported that learners considered DeepL helpful in increasing translation accuracy while simultaneously supporting vocabulary acquisition. Furthermore, Polakova and Klimova (2023) found that the application contributed positively to students' formal writing ability by enhancing grammatical accuracy and lexical diversity. These findings indicate that AI-supported translation technology can positively influence English language learning when integrated appropriately into academic activities.

Despite these advantages, the integration of AI-powered translation tools also raises important pedagogical concerns. Excessive reliance on machine translation may reduce students' opportunities to practice independent language production, critical thinking, and problem-solving skills (A'yun et al., 2025; Sidiq & Syafryadin, 2024). Students may become accustomed to accepting translation outputs without evaluating their contextual appropriateness or grammatical accuracy, thereby weakening their engagement with the language learning process itself. Moreover, ethical concerns regarding plagiarism and academic integrity have emerged because students may submit machine-generated translations without sufficient revision or personal contribution (Sidiq & Syafryadin, 2024). Therefore, AI-assisted translation should be viewed as a complementary learning resource rather than a substitute for meaningful language learning.

Students' perceptions play an essential role in determining whether educational technology contributes positively to language learning outcomes. Perception encompasses learners' cognitive evaluations, affective responses, and behavioral tendencies developed through their interaction with learning experiences (Dörnyei & Ryan, 2015; Eagly & Chaiken, 1993; Scherer et al., 2018). Positive perceptions encourage technology acceptance, autonomous learning, and sustained engagement, whereas negative perceptions may hinder effective technology integration. Consequently, investigating students' perceptions provides valuable insights into how AI applications are interpreted, utilized, and evaluated within authentic educational settings.

Several previous studies have examined students' perceptions of DeepL in English language learning. Munawwarah and Martriwati (2024) reported that Indonesian university students generally expressed favorable attitudes toward DeepL because it facilitated text comprehension and accelerated assignment completion. Likewise, Laksana and Komara (2024) found that learners preferred DeepL over Google Translate due to its contextual accuracy and more natural sentence construction. Polakova and Klimova (2023) emphasized DeepL's contribution to writing development, while Sidiq and Syafryadin (2024) highlighted its role in enhancing translation quality despite concerns regarding learner dependency. Collectively,



these studies confirm the growing pedagogical relevance of AI-assisted translation technologies within English language education.

Nevertheless, previous investigations have predominantly adopted quantitative or mixed-method approaches focusing on users' satisfaction, translation accuracy, or application effectiveness. Relatively limited attention has been devoted to exploring students' lived experiences and perceptions through qualitative inquiry, particularly within specific institutional contexts in Indonesian higher education. Furthermore, few studies have comprehensively examined students' cognitive, affective, and behavioral perceptions alongside the practical challenges encountered when integrating DeepL into everyday English learning activities. This limitation creates an important research gap requiring further exploration through an in-depth qualitative perspective.

Although existing studies consistently report the positive contribution of DeepL to English language learning, several limitations remain apparent. First, most previous research has concentrated on measuring learners' attitudes through survey-based quantitative approaches, providing limited explanations of how students interpret, experience, and integrate DeepL into their daily academic practices (Munawwarah & Martriwati, 2024; Sidiq & Syafryadin, 2024). Second, prior investigations have primarily emphasized translation accuracy and learning effectiveness while paying relatively little attention to the interaction between students' cognitive evaluations, emotional responses, behavioral practices, and the challenges arising from AI-assisted translation. Consequently, the complex relationship between students' perceptions and their actual learning behavior remains insufficiently understood.

Another limitation concerns the research context. Previous studies have generally involved participants from multiple universities or broader regional populations, making it difficult to explain how institutional characteristics shape students' experiences with AI-assisted translation. English Education students, particularly those preparing to become future English teachers, engage intensively in academic reading, translation, academic writing, and language analysis throughout their study program. These learning demands distinguish them from learners in other academic disciplines and may influence how they perceive and utilize AI-powered translation technology. Therefore, examining students within a specific institutional setting can provide richer contextual evidence regarding the educational role of DeepL in English language learning.

The English Education Department of Universitas Bhinneka PGRI represents an appropriate context for investigating this issue because students actively integrate digital technology into various academic activities, including reading international journal articles, completing translation assignments, writing academic papers, and preparing undergraduate theses. During these learning processes, DeepL has become one of the translation applications most frequently used by students to facilitate comprehension and language production. However, differences in students' learning experiences suggest that DeepL is not utilized uniformly. While some students employ the application as a learning support tool to develop vocabulary, grammar awareness, and writing quality, others rely heavily on translation outputs to complete assignments. These contrasting practices indicate that students' perceptions may substantially influence how AI technology contributes to or constrains language learning.

The present study offers several contributions that distinguish it from previous research. Rather than focusing solely on the effectiveness of DeepL or learners' satisfaction, this study adopts a descriptive qualitative approach to obtain an in-depth understanding of students' experiences. Furthermore, students' perceptions are explored comprehensively through three



interrelated dimensions—cognitive, affective, and behavioral perceptions while simultaneously examining the practical challenges encountered during the use of DeepL in English learning. This integrated perspective provides a more holistic explanation of how AI-assisted translation influences students' learning experiences beyond simple measures of technology acceptance.

The study also contributes to the growing discussion on the pedagogical integration of artificial intelligence in English language education. As AI applications become increasingly accessible, educators require empirical evidence concerning not only the advantages of these technologies but also their potential risks, including learner dependency, contextual translation limitations, and issues related to academic integrity. Understanding students' perspectives is therefore essential for designing instructional strategies that encourage the responsible, ethical, and pedagogically meaningful use of AI-based translation tools while maintaining learners' critical thinking and language development.

Based on these considerations, this study aims to explore students' perceptions of using the DeepL application in learning English at the English Education Department of Universitas Bhinneka PGRI and to identify the challenges they encounter during its implementation. The findings are expected to enrich the existing literature on AI-assisted language learning, provide practical implications for English language educators in integrating machine translation into classroom instruction, and serve as a reference for future research investigating the educational use of artificial intelligence in English language learning.

RESEARCH METHOD

This study employed a descriptive qualitative design to explore students' perceptions of using the DeepL application in learning English. A qualitative approach was selected because it enables researchers to obtain an in-depth understanding of participants' experiences, opinions, and interpretations regarding the phenomenon under investigation rather than measuring variables statistically (Creswell & Creswell, 2023). The study was conducted at the English Education Department of Universitas Bhinneka PGRI during the Even Semester of the 2025/2026 Academic Year, with data collection (questionnaire distribution and in-depth interviews) carried out definitively from February to April 2026. The participants consisted of students from the second, fourth, sixth, and eighth semesters who had experience using the DeepL application in their English learning activities. Participants were selected using purposive sampling to ensure that the collected data represented students who were familiar with AI-assisted translation technology. Initially, questionnaires were distributed to 30 students, of whom 18 reported actively using DeepL. To obtain richer information, six participants representing different learning experiences voluntarily participated in semi-structured interviews.

The researcher served as the primary research instrument, supported by a questionnaire, semi-structured interview guidelines, and documentation. The questionnaire was designed to obtain an overview of students' perceptions regarding DeepL, while the interviews explored participants' experiences, opinions, and challenges in greater depth. The instruments were developed based on four aspects: cognitive perception, affective perception, behavioral perception, and challenges encountered when using DeepL. Prior to data collection, the instruments were reviewed and validated by an expert lecturer to ensure their relevance, clarity, and consistency with the research objectives. Data were collected through three complementary techniques. First, questionnaires were distributed via Google Forms to identify students who actively used DeepL and to obtain preliminary information regarding their perceptions. Second,



semi-structured interviews were conducted individually to explore participants' learning experiences, attitudes, and challenges in using the application. Finally, documentation, including field notes and interview recordings, was employed to support data completeness and facilitate data verification.

The collected data were analyzed using the interactive model proposed by Miles et al. (2014), consisting of data reduction, data display, and conclusion drawing. During the reduction stage, the researcher selected and organized relevant information from questionnaires, interviews, and supporting documents. The data were subsequently categorized into themes representing cognitive perception, affective perception, behavioral perception, and challenges associated with DeepL usage. The findings were then interpreted through thematic analysis to identify recurring patterns and relationships among participants' responses. To ensure the trustworthiness of the findings, this study applied credibility, dependability, confirmability, and transferability criteria. Technique triangulation was employed by comparing information obtained from questionnaires, interviews, and documentation. In addition, the research procedures, data analysis process, and interpretation were systematically documented to enhance the transparency and credibility of the study.

RESEARCH FINDINGS AND DISCUSSION

Result

Participants' Profile

The study involved 30 students from the English Education Department of Universitas Bhinneka PGRI, representing the second, fourth, sixth, and eighth semesters. Based on the preliminary questionnaire, 18 students (60.0%) reported actively using the DeepL application in their English learning, while the remaining 12 students (40.0%) had never used the application. Since this study focused on students' perceptions of DeepL, only the responses of the 18 users were analyzed. To obtain more in-depth insights, six participants were purposively selected for semi-structured interviews based on their experience using DeepL in academic learning. In terms of self-reported English proficiency, 12 participants (66.7%) identified themselves as intermediate learners, while six participants (33.3%) considered themselves beginners. None of the participants reported having an advanced level of English proficiency. These participants provided the primary data for exploring students' perceptions and the challenges of using DeepL in English language learning.

Cognitive Perception

Students' cognitive perception refers to their evaluation of the usefulness, accuracy, and contribution of DeepL to English language learning. The questionnaire results indicate that most participants perceived DeepL as an effective learning support tool, particularly for translating academic texts, improving vocabulary, and understanding English grammatical structures. The summary of students' responses is presented in Table 1.

Table 1. Summary of Students' Cognitive Perceptions toward DeepL (n = 18)

No.	Cognitive Indicators	Number of Students	Percentage
1.	DeepL provides natural and accurate translations	15	83.3%
2.	DeepL supports academic learning activities	16	88.9%
3.	DeepL improves vocabulary and grammar understanding	17	94.4%



As shown in Table 1, most participants positively evaluated DeepL's performance in supporting English learning. Nearly all respondents agreed that the application facilitated vocabulary acquisition and grammatical understanding, while more than four-fifths considered its translations to be accurate and contextually appropriate. These findings suggest that students perceive DeepL not merely as a translation application but also as an instructional resource that supports language development.

The interview data further reinforced these findings. Participants explained that DeepL produced translations that sounded more natural than other machine translation applications and enabled them to comprehend complex English texts more efficiently. One participant stated:

"I started using DeepL because its translations are more natural and easier to understand than other translation applications I have used." (P1)

Another participant emphasized that the application translated ideas rather than individual words, resulting in more coherent sentences:

"DeepL understands the meaning of the whole sentence instead of translating word by word, making the translation sound much more natural." (P6)

Besides improving translation quality, students also acknowledged DeepL's contribution to academic learning. Most participants reported using the application when reading journal articles, completing translation assignments, and writing academic papers. By comparing the original and translated texts, students became more familiar with academic vocabulary, sentence patterns, and grammatical structures. Consequently, DeepL functioned not only as a translation aid but also as a medium for independent language learning.

Overall, the findings demonstrate that students hold positive cognitive perceptions of DeepL. They regard the application as an effective educational technology that facilitates comprehension, enriches vocabulary, strengthens grammatical awareness, and supports various academic activities in English language learning.

Affective Perception

Affective perception reflects students' emotional responses and attitudes toward using DeepL in English language learning. The questionnaire findings revealed that most participants experienced positive feelings when using the application, particularly in terms of confidence and learning motivation. Nevertheless, several students also expressed concerns about becoming overly dependent on AI-assisted translation. The summary of students' responses is presented in Table 2.

Table 2. Summary of Students' Affective Perceptions toward DeepL (n = 18)

No.	Affective Indicators	Number of Students	Percentage
1.	DeepL increases confidence in learning English	16	88.9%
2.	Students are aware of the risk of overdependence	9	50.0%

Table 2 indicates that the majority of participants believed that DeepL enhanced their confidence when completing English-related tasks. By providing clear and contextually appropriate translations, the application reduced learners' uncertainty when reading academic texts and composing written assignments. As a result, students felt more capable of understanding complex materials and expressing their ideas in English.

The interview findings further supported this result. One participant explained:

"I feel more confident because DeepL helps me understand difficult materials and academic assignments." (P1)

Similarly, another participant stated:



“DeepL helps me understand English materials better, so I become more confident when completing my assignments.” (P2)

Although students generally expressed positive emotional responses, several participants acknowledged the possibility of becoming excessively dependent on the application. They emphasized that DeepL should be used as a learning aid rather than as a substitute for independent learning. One participant remarked:

“Sometimes I worry that I might become too dependent on the application if I use it continuously without trying to learn by myself.” (P5)

These findings indicate that students demonstrate balanced affective perceptions toward DeepL. While they appreciate its contribution to improving confidence and reducing learning difficulties, they also recognize the importance of maintaining independent learning habits and using AI technology responsibly. Such awareness suggests that students understand both the advantages and potential risks associated with AI-assisted translation in English language learning.

Behavioral Perception

Behavioral perception refers to students' actual practices and strategies when using DeepL in English language learning. The questionnaire findings indicate that most participants actively integrated DeepL into their academic activities while maintaining a critical approach toward the translation outputs. Rather than relying entirely on the application, students reported reviewing and revising the translated texts before using them in academic assignments. The summary of students' responses is presented in Table 3.

Table 3. Summary of Students' Behavioral Perceptions toward DeepL (n = 18)

No.	Behavioral Indicators	Number of Students	Percentage
1.	Frequently use DeepL in academic activities	14	77.8%
2.	Use DeepL to support vocabulary and grammar learning	15	83.3%
3.	Review and revise translation results before use	18	100.0%

As presented in Table 3, the majority of participants regularly used DeepL to support various academic activities, including reading journal articles, translating texts, completing assignments, and writing academic papers. In addition to translation purposes, students also utilized the application to expand their vocabulary and improve their understanding of English grammatical structures. More importantly, all participants reported evaluating the translation results before incorporating them into their academic work, indicating responsible use of AI-assisted translation.

The interview findings confirmed these practices. One participant explained:

“I use DeepL in almost every course because it helps me understand English texts and complete academic assignments more efficiently.” (P1)

Another participant stated that the application was particularly helpful during academic writing activities:

“I mostly use DeepL when writing research papers because it provides appropriate vocabulary and sentence structures for academic writing.” (P2)

Participants also emphasized that they did not accept the translation outputs without evaluation. Instead, they compared the translated version with the original text and made revisions whenever necessary. As one participant remarked:



"I always reread the translation and compare it with the original text before using it. I never copy the translation directly." (P6)

These findings demonstrate that students generally employ DeepL as a complementary learning resource rather than as a substitute for independent learning. Their habit of reviewing, comparing, and revising translation outputs reflects critical learning behavior and suggests that AI-assisted translation is used to support, rather than replace, language development. Overall, students exhibited positive behavioral perceptions by integrating DeepL into their learning process while maintaining responsibility for the quality and accuracy of their academic work.

Challenges Faced by Students When Using DeepL

Although students generally expressed positive perceptions toward DeepL, the findings revealed several challenges associated with its use in English language learning. These challenges included contextual translation limitations, the risk of learner dependency, concerns regarding academic integrity, and technical constraints related to the application. A summary of the identified challenges is presented in Table 4.

Table 4. Summary of Challenges in Using DeepL (n = 18)

No.	Challenges	Description
1.	Contextual translation limitations	Difficulty translating idiomatic expressions, technical terms, and context-specific language accurately.
2.	Dependency concerns	Excessive reliance on DeepL may reduce independent language practice and critical thinking.
3.	Academic integrity issues	Students emphasized that DeepL should support learning rather than replace their own work.
4.	Technical limitations	Restricted features in the free version and the need for a stable internet connection.

As shown in Table 4, the most frequently reported challenge concerned the contextual limitations of machine translation. Although participants considered DeepL highly accurate, they acknowledged that certain academic terminology, idiomatic expressions, and discipline-specific vocabulary occasionally required additional revision. Consequently, students often verified translation results using dictionaries, academic references, or alternative sources before incorporating them into their assignments.

The interview findings further illustrated this issue. One participant explained:

"DeepL is generally accurate, but I still need to check specialized academic terms because some translations do not fully match the intended context." (P1)

Another participant similarly stated:

"Sometimes the translation is not completely appropriate for a particular context, so I revise it before using it in my assignments." (P5)

Another concern highlighted by the participants was the possibility of becoming overly dependent on AI-assisted translation. Several students admitted that continuous reliance on DeepL might reduce opportunities to develop independent language skills. Nevertheless, they emphasized that the application should function as a learning aid rather than a replacement for the learning process itself.

Ethical considerations also emerged during the interviews. Participants agreed that using DeepL was acceptable provided that students understood the translated content, revised the output when necessary, and remained responsible for the originality of their academic work. Directly submitting machine-generated translations without critical evaluation was considered inconsistent with academic integrity.



In addition, several participants mentioned technical limitations, particularly those associated with the free version of DeepL. Restricted access to premium features, character limitations, and dependence on a stable internet connection occasionally reduced the application's effectiveness. Furthermore, participants noted that although DeepL generated accurate translations, it rarely explained the grammatical principles or linguistic reasoning underlying its translation choices. Therefore, students often complemented DeepL with dictionaries, grammar references, or lecturer feedback to gain a deeper understanding of English language use.

Overall, these findings indicate that while DeepL provides substantial support for English language learning, its effectiveness depends largely on how students utilize the application. Responsible, critical, and balanced use enables learners to benefit from AI-assisted translation while minimizing potential drawbacks related to dependency, translation accuracy, and academic ethics.

Discussion

Students' Perceptions of Using DeepL in English Language Learning

The findings demonstrate that students generally hold positive perceptions toward the use of DeepL in English language learning. This positive perception is reflected through three interconnected dimensions, namely cognitive, affective, and behavioral perceptions. Collectively, these findings indicate that students perceive DeepL not only as a machine translation application but also as a learning support tool that facilitates language comprehension, promotes autonomous learning, and assists in accomplishing academic tasks. From the cognitive perspective, students considered DeepL effective in producing accurate and contextually appropriate translations while supporting vocabulary development, grammatical awareness, and comprehension of academic texts. Rather than functioning solely as a translation service, DeepL enabled students to compare the source and target texts, allowing them to recognize lexical choices and sentence structures more effectively. This finding supports the concept of cognitive perception proposed by Eagly and Chaiken (1993), which explains that individuals' evaluations are shaped by their knowledge and direct experiences with a particular object. Since participants frequently employed DeepL during reading, translation, and academic writing activities, their repeated positive experiences contributed to favorable evaluations of the application.

The present findings are consistent with previous studies reporting that DeepL generates more natural and context-sensitive translations than many other machine translation systems (Laksana & Komara, 2024; Polakova & Klimova, 2023). Similarly, Munawwarah and Martriwati (2024) found that students perceived DeepL as an effective educational technology for understanding English texts and improving academic writing. The consistency of these findings suggests that DeepL possesses considerable pedagogical potential when integrated appropriately into English language learning. Positive perceptions also emerged from the affective dimension. Students reported that DeepL increased their confidence when reading academic materials, understanding unfamiliar vocabulary, and completing English assignments. By reducing linguistic barriers, the application created a more comfortable learning environment and encouraged students to engage more actively in English learning activities. These findings support Dörnyei and Ryan (2015), who argue that positive emotional experiences significantly influence learners' motivation and engagement. Students who feel confident while learning are generally more willing to participate in challenging language tasks and develop greater learning autonomy.



Nevertheless, participants also demonstrated awareness of the possible negative consequences associated with excessive AI use. Several students expressed concerns regarding dependency, acknowledging that continuous reliance on DeepL without active language practice might limit the development of independent learning skills. This balanced perspective indicates that students do not perceive DeepL as a complete substitute for learning but rather as a complementary resource requiring responsible use. Similar concerns were reported by Sidiq and Syafryadin (2024), who emphasized that excessive dependence on machine translation may reduce learners' critical engagement with language.

Behavioral perception further strengthens these findings. Most participants reported using DeepL regularly for academic purposes, including reading journal articles, translating texts, and preparing academic writing. More importantly, students demonstrated responsible learning behavior by reviewing, comparing, and revising translation outputs before applying them to their assignments. Such practices indicate that learners actively evaluated AI-generated translations instead of accepting them uncritically. This finding aligns with Scherer et al. (2018), who explain that behavioral perception is reflected in individuals' actions when interacting with technology. The participants' critical use of DeepL suggests that AI-assisted translation can encourage reflective learning when accompanied by learners' active involvement. Taken together, the cognitive, affective, and behavioral findings demonstrate that students perceive DeepL as an educational technology that complements rather than replaces language learning. The application supports comprehension, facilitates academic writing, enhances confidence, and encourages autonomous learning while still requiring learners to evaluate and refine translation outputs critically. These findings reinforce the growing view that AI applications should function as pedagogical support systems that enhance learning experiences without diminishing students' responsibility for developing their own language competence.

Challenges of Using DeepL in English Language Learning

Despite students' generally positive perceptions, this study also identified several challenges that influence the educational use of DeepL. These challenges include contextual translation limitations, dependency concerns, issues of academic integrity, and technical constraints. The existence of these challenges indicates that the effectiveness of AI-assisted translation depends not only on technological quality but also on how learners utilize the application within educational contexts. The most frequently reported challenge concerned contextual translation accuracy. Although participants regarded DeepL as highly accurate, they acknowledged that certain academic terminology, idiomatic expressions, and discipline-specific language still required careful evaluation. Consequently, students often verified translation outputs using dictionaries, academic references, or lecturer feedback before incorporating them into their academic work. These findings support Laksana and Komara (2024), who reported that although DeepL generally produces superior translations, contextual interpretation remains a limitation when handling specialized language.

Another important challenge relates to learner dependency. Participants recognized that frequent reliance on DeepL might reduce opportunities to practice vocabulary selection, grammatical analysis, and independent writing. Rather than rejecting AI technology, however, students emphasized the importance of balancing technological assistance with active language learning. This finding is consistent with A'yun et al. (2025) and Sidiq and Syafryadin (2024), who argue that overreliance on machine translation may weaken learners' critical thinking and language production if AI replaces rather than supports the learning process. Ethical issues also



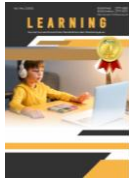
emerged as an important consideration. Participants generally agreed that using DeepL is academically acceptable when employed to facilitate understanding and improve learning outcomes (Kanik, 2025; Karataş et al., 2024; Liang, 2024; Shofiah & Putera, 2024; Yitages & Kasai, 2024). However, they considered it inappropriate to submit machine-generated translations without revision or personal contribution. This awareness reflects students' understanding of academic integrity and suggests that responsible AI use requires learners to remain accountable for the originality and quality of their academic work. Therefore, ethical concerns are associated primarily with users' practices rather than with the technology itself.

Finally, participants reported several technical limitations, including restricted features in the free version, dependence on internet connectivity, and the absence of explanations regarding grammatical rules or translation choices. Although these limitations did not substantially reduce the perceived usefulness of DeepL, they indicate that AI-assisted translation should be complemented by other educational resources, such as dictionaries, grammar references, classroom instruction, and lecturer feedback. Combining multiple learning resources enables students to gain a deeper understanding of language rather than relying exclusively on automatic translation. Overall, the findings suggest that DeepL offers substantial educational benefits while simultaneously presenting pedagogical challenges that require careful management. Its effectiveness depends largely on students' ability to use the application critically, ethically, and strategically. Therefore, lecturers should encourage learners to employ DeepL as a complementary learning resource that supports language development while continuing to foster independent learning, critical thinking, and academic integrity.

CONCLUSION

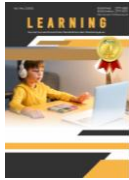
The utilization of the DeepL application generally evokes positive perceptions among English Education students at Universitas Bhinneka PGRI across cognitive, affective, and behavioral dimensions. Cognitively, the platform is perceived as an effective learning aid that delivers contextually accurate neural machine translations, enhances academic vocabulary acquisition, and fosters grammatical awareness during text analysis. Affectively, incorporating this tool reduces task-related anxiety while simultaneously boosting learners' confidence in comprehending complex international academic literature. Behaviorally, students demonstrate responsible technology adoption by reviewing, comparing, and editing the translation outputs rather than accepting them uncritically. Despite these pedagogical advantages, several operational challenges persist, including contextual translation limitations on specialized terminology, risks of cognitive overdependence, academic integrity concerns, and technical constraints within the free version.

These findings imply that artificial intelligence translation applications should be strategically integrated into higher education curricula as complementary pedagogical resources rather than complete substitutes for language acquisition. Educators must establish clear ethical guidelines and encourage critical evaluation strategies to prevent passive learner reliance. Future research should expand the empirical scope by involving larger, multi-institutional participant samples or employing longitudinal experimental designs to evaluate the long-term impact of AI-assisted translation on independent language proficiency, academic writing performance, and learner autonomy. Comparative studies examining the relative efficacy of various neural machine translation platforms in diverse educational settings are also recommended to provide a more comprehensive framework for technology-enhanced language learning.



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