

Students' Perception Toward The Use of DeepL as a Machine Translation Tool for English Writing

Gita Ramadhanti¹, Yanti Sri Rezeki², Surmiyati³

Universitas Tanjungpura, Indonesia

¹ f1021211051@student.untan.ac.id, ² yanti.sri.rezeki@fkip.untan.ac.id, ³ surmiyati@fkip.untan.ac.id

Abstract

Students faced challenges in translating Indonesian to English for academic writing. DeepL provided a translation solution, leading this study to investigate students' perceptions of using DeepL as a translation tool for writing in English. This mixed-method study examined 117 students (31 males, 86 females) from the English Language Study Program, semester 6 and 8 programs, Universitas Tanjungpura, selected through purposive sampling. Data were collected using validated online questionnaires. Quantitative analysis utilized descriptive statistics and Mann-Whitney U tests, while qualitative data used thematic analysis. The findings showed that students demonstrated high positive perceptions across all dimensions: PEOU (3.92), PU (3.69), ATU (3.75), and BIU (3.62). DeepL was perceived as highly accessible and effective for enhancing writing quality, particularly in contextual vocabulary and grammar improvement, with no significant gender differences emerging ($U = 1245.000$, $Z = -.544$, $p = 0.587$). In conclusion, DeepL was widely accepted by both genders as a translation tool for writing effectively, improving the efficiency and quality of students' writing. The implication was that DeepL showed strong potential for strategic integration in English writing assignments. However, implementation should have emphasized critical evaluation skills and balanced usage to prevent over-dependence while maximizing benefits for writing efficiency and quality improvement.

Keywords: DeepL; Machine Translation; Student Perception; Writing; TAM

INTRODUCTION

In learning English, there are four skills that must be learned, which are listening, speaking, reading, and writing. As one of the productive skills, writing is a skill that needs to be learned in learning a language. Productive skills are the ability to produce or communicate in written or spoken form in a foreign language (Yuzar & Rejeki, 2020). In Indonesia, English is labeled as a foreign language and is usually studied in certain educational contexts. English in Indonesia has been labeled English as a Foreign Language (EFL), despite its increasing popularity and dominance, especially in universities and private institutions (Sari, 2022). Therefore, writing is one of the productive skills in learning English, which in Indonesia has the status of English as a Foreign Language (EFL), enabling students to convey their thoughts in written form.

However, students felt that writing in a foreign language requires more effort than writing in their mother tongue, especially for academic writing. Winarsih et al. (2021) revealed that students realize that academic writing in English offered greater difficulties than writing in their first language, especially when it came to word choice. Then, the use of translation is a strategy in writing from one language to another. Murtisari (2021) in her research revealed that less able and competent students in English generally use translation as a strategy in writing. Translation is a common strategy used in cross-language writing for various language proficiency levels.

In spite of that, there are many students who experience difficulties in translating one language into another while learning a foreign language, especially in translating Indonesian into English. Retnomurti et al. (2024) found that students struggled in a number of areas such as grammatical, pragmatic, lexical-semantic, and cultural-linguistic abilities with the majority of translation errors were discovered in the areas of grammar in capitalization, pluralization, word inflection, present tense misuse, use of demonstrative pronouns and fragments that express them, as well as the agreement between the subject and verb participles. Additionally, technical, pragmatic, and text-specific difficulties were the kinds that the students considered as the most challenging in translating Indonesian into English (Muyassaroh, 2022). Thus, although translation is a common strategy, many students experience significant difficulties in translating Indonesian into English.

Whereas in the era of technological development, students are facilitated by the existence of translation machines that make it easier for them to translate, especially from other languages to English. As technology has advanced, machine translation has become an appealing alternative to traditional human translation (Samputra et al., 2024). Technological advances have made translation machines increasingly popular due to their ability to translate quickly and efficiently, making them an attractive alternative compared to manual translation. With the rapid development of technology, artificial intelligence (AI) has played a very significant role in various fields. One important breakthrough is the integration of AI into translation tools using the Neural Machine Translation approach. This system enables the rapid and automatic translation of large amounts of text, thereby bridging language gaps more efficiently (Škobo & Petričević, 2023). Poibeau (2017) mentions that Google Translate and Microsoft are examples of translation engines that use this system.

Although other translation tools are widely known, DeepL uses a similar system and even offers more interesting features. Kahlon and Singh (2023) stated that DeepL is one example of a superior Neural Machine Translation approach. DeepL's standout feature is its ability to provide rich word alternatives and synonyms. According to Liang (2024), this alternative word feature is very valuable, especially in the context of education, because it helps students choose the most appropriate vocabulary for the context. In addition, features such as fast translation and a user-friendly interface are also useful in increasing productivity and convenience for students as users (Laksana & Komara, 2024). It makes no wonder that DeepL is becoming increasingly popular. A study by Fadhillah et al. (2025) shows that the majority of students (67.7%) prefer to use DeepL over Google Translate, proving DeepL's place as the preferred translation tool.

Also, the translation results from DeepL are preferred by many communities because it is detailed and natural according to the context. Telaumbanua et al. (2024) stated that DeepL is a great option for professional usage because of its advanced neural machine translation, which is driven by an extensive amount of data and properly obtains language nuances, provides precise translations, and produces translations that feel natural. The use of DeepL also gives students a positive view and satisfaction towards its use for translating. Students are fairly satisfied with DeepL, praising its high translation accuracy, quick processing speed, and advanced contextual understanding abilities (Khairyah et al., 2024). Therefore, it is necessary to see how students perceive how DeepL is used as a translation machine for their English writing. Where, perception is the processing of information received from individuals of the surroundings through the five senses and selected by the brain to be interpreted based on the senses or previous experience that each person may perceive objects differently based on different based ideas (Oktaviani et al, 2022).

The rapid advancement of technology has transformed academic writing practices, particularly through advanced machine translation tools such as DeepL. Several studies have documented its growing adoption among students. Munawwarah (2024) found that students consider DeepL legally appropriate for academic tasks, as it helps improve vocabulary, comprehension, and saves time. Asmara and Kembaren (2024) reported that students prefer DeepL over other tools due to its accuracy, frequently using it for thesis and journal writing. In the EFL context, Polakova and Klimova (2023) revealed that DeepL as a Neural Machine Translation (NMT) tool significantly improved students' English proficiency, with students showing positive perceptions toward its use.

Despite these findings, existing studies have largely focused on general attitudes toward DeepL without systematically examining the underlying factors driving its acceptance, particularly among Indonesian EFL students in academic writing contexts. Furthermore, the role of gender in shaping technology acceptance patterns remains underexplored.

To address these gaps, this study employs the Technology Acceptance Model (TAM) by Davis (1989) to examine students' perceptions and adoption patterns of DeepL for English writing tasks. TAM provides a robust framework through four main constructs: Perceived Ease of Use (PEOU), Perceived Usefulness (PU), Attitude Toward Using (ATU), and Behavioral Intention to Use (BIU). The novelty of this study lies in its integration of TAM constructs with gender-based analysis in the specific context of machine translation tool use among Indonesian EFL students engaged in academic writing.

According to Strzelecki and Arabawy (2024), individual characteristics such as gender are taken as moderating constructs that influence the acceptance of technology. Consequently, this study utilizes the Technology Acceptance Model and considers gender as a factor influencing technology acceptance in the context of DeepL usage among EFL students. Building upon this theoretical foundation, this research investigates how 6th and 8th semester English Language Education students at Universitas Tanjungpura perceive and adopt DeepL for their academic writing during the 2024/2025 academic year. Using the TAM framework, this study examines students' technology acceptance patterns and explores potential gender differences in their perceptions and usage behaviors of DeepL as a translation tool for English writing tasks.

METHOD

This study employed a mixed-methods descriptive design to investigate students' perceptions toward DeepL as a machine translation tool for English writing among 6th and 8th semester students in the English Language Education Study Program at Universitas Tanjungpura during the 2024/2025 academic year. A mixed-methods descriptive design was chosen because the study sought to comprehensively examine both the measurable patterns of technology acceptance and the underlying perceptions and experiences of students toward DeepL, presenting the findings through a combination of statistical analysis and descriptive interpretations of the collected data (Davis, 1989; Kothari, 2004; Leavy, 2017).

Table 1. Research Participants

No.	Gender	Number of Students	Percentage
1.	Male	31	26.5
2.	Female	86	73.5

TOTAL	117	100%
--------------	------------	-------------

The mixed-methods approach was selected to provide comprehensive insights by combining quantitative and qualitative data, allowing for a deeper understanding of students' experiences with DeepL that cannot be achieved through a single method alone (Leavy, 2017).

Data were collected through an online questionnaire distributed to participants selected using purposive sampling. The questionnaire consisted of both closed-ended and open-ended questions to gather quantitative and qualitative data simultaneously. The closed-ended questions were adapted from established Technology Acceptance Model (TAM) constructs by Davis (1989), including Perceived Ease of Use (PEOU) and Perceived Usefulness (PU), with additional items for Attitude Toward Using (ATU) from Weng et al. (2018) and supplemented with relevant items from Suh and Han (2002), as well as Behavioral Intention to Use (BIU) from Brezavšek et al. (2017) with additional items from Suh and Han (2002). Furthermore, two open-ended questions were developed to explore students' experiences and opinions regarding DeepL usage in greater depth. The 5 Likert scale is used to measure these categories related to students' perception, which was filled out by students, with the criteria of perception presented below.

Table 2. The Criteria of Perception According to Mean

No.	Mean	Criteria
1.	4.01 – 5.0	Very High
2.	3.01 – 4.0	High
3.	2.02 - 3.0	Medium
4.	1.01 - 2.0	Low
5.	0.5 - 1.0	Very Low

(Siahaan, 2020)

Data analysis involved different approaches for each research objective. To address the first research question regarding students' overall perceptions of DeepL, descriptive statistics were used to analyze quantitative data, while thematic analysis was employed to examine qualitative responses. For the second research question examining gender differences in perceptions, the Mann-Whitney U test was conducted to determine whether significant differences exist between male and female students' acceptance and usage of DeepL for English writing tasks.

RESULTS AND DISCUSSION

Results

Students' Perception toward The Use of DeepL as A Machine Translation Tool for English Writing

The research findings revealed that students in the 6th and 8th semesters of the English Language Education Study Program at Universitas Tanjungpura for the academic year 2024/2025 showed high perceptions toward the use of DeepL for English writing activities, with an overall mean score of 3.75, indicating a high level of perception.

Table 3. Students' Perceived Ease of Use

No. Item	Statements	Mean	Std. Dev.
1	I find DeepL easy to use for translating Indonesian texts to English in writing activity.	4.25	0.70
2	Accessing DeepL to translate paragraphs from Indonesian to English is very easy.	4.21	0.75
3	I find it easy to get accurate translations from Indonesian to English using DeepL for my writing in English.	3.89	0.71
4	I find it easy to fix translation errors in English writing when translating from Indonesian to English using DeepL.	3.97	0.72
5	In terms of features and User Interface, it is easy for me to remember how to use DeepL to translate Indonesian to English for writing in English.	4.13	0.70
6	DeepL does not provide a helpful guide to translating from Indonesian to English during writing activities in the English writing classroom.	3.07	0.98
MEAN		3.92	

In terms of Perceived Ease of Use (PEOU), the results showed that students' overall perceptions obtained a high level of perception regarding the ease of use of DeepL. The items that received the highest level addressed the ease of using DeepL to translate Indonesian text into English, accessing for translating paragraphs, and remembering how to use DeepL's features and interface. The results revealed that students demonstrated very high perceptions regarding DeepL's ease of use, particularly in translating Indonesian text into English, accessing translation features for paragraphs, and remembering the interface functionalities. These results indicate consistent positive perceptions of DeepL's user-friendliness and accessibility. Additionally, students perceived DeepL as highly good in terms of translation correction features and accuracy, with translation correction features receiving slightly higher scores than accuracy aspects. The reverse-scored item (Item 6) received the lowest mean score (3.20), which indicates strong student disagreement with negative statements about DeepL's guidance quality, indicating that students perceive DeepL as providing effective support for Indonesian-to-English translation in academic writing contexts.

The quantitative findings are supported and explained by qualitative data that DeepL is easy to use with its simple interface and quick translation process, as students wrote: *“In my experience, it's very easy to access DeepL because there aren't too many features that cause us confusion.”* (Student 1). *“I think it's very easy to access and use DeepL to translate Indonesian to English for my writing.”* (Student 9). However, despite the overall positive perception, students identified specific limitations, particularly regarding word limits and premium features that restrict the free version's functionality, indicating that while the basic usability is highly rated, technical constraints affect the complete user experience, as students wrote: *“Easy to get translation from deepL, it is also difficult because limited for non-premium.”* (Students 77). *“It's more convincing for me to choose suitable vocabulary that matches with my writing context when using DeepL. however, the premium features where the user should buy if they want to translate longer text is not convenient experience for me.”* (Student 4).

It can be concluded that DeepL is a highly efficient and user-friendly translation tool for supporting English writing activities, featuring an easy-to-use interface, also providing accurate translation and quick translation process.

Table 4. Students' Perceived Usefulness

No. Item	Statements	Mean	Std. Dev.
7	Using DeepL improved my English writing performance in terms of contextualized vocabulary in English.	3.79	0.75
8	DeepL helps with essential aspects such as grammatical aspects of English writing.	3.78	0.69
9	Using DeepL enables me to complete more English writing assignments especially those from writing classes.	3.82	0.74
10	DeepL improves my effectiveness in selecting alternative words that are more contextually appropriate in English writing activities.	4.04	0.74
11	DeepL improved the quality of my English writing in terms of grammar.	3.73	0.79
12	DeepL makes it easier for me to do English writing assignments from writing classes in terms of mechanics including spelling.	3.93	0.76
13	Using DeepL does not save my time when translating from Indonesian to English for writing in English.	3.20	1.13
14	My writing activity in English would be difficult to complete without DeepL as a machine translation.	3.24	0.95
MEAN		3.69	

In the Perceived Usefulness (PU) construct, students stated that DeepL is very useful for translating Indonesian texts into English in writing activities. The highest score in the was achieved by Item 10, which addresses DeepL's effectiveness in helping students select contextually appropriate alternative words for English writing activities. This result indicates that DeepL is very highly beneficial for students in developing their ability to select contextually appropriate vocabulary for English writing activities. Seven additional items were categorized as "High," encompassing DeepL is beneficial for various aspects of writing, including mechanical writing improvements, task completion efficiency, vocabulary enhancement, and grammatical assistance. Importantly, while students highly valued DeepL's specific writing assistance features, they reported relatively lower dependence levels on the tool, suggesting that students maintain balanced and strategic usage patterns rather than over-reliance on the technology. The reverse-scored item (Item 6) received the lowest mean score (3.20), which indicates strong student disagreement with negative statements about the use of DeepL does not save time when translating from Indonesian to English for writing in English. In other words, this indicates that respondents actually feel that DeepL saves them time when translating from Indonesian to English for writing purposes.

These finding is confirmed by qualitative findings which highlight DeepL's ability to provide contextual vocabularies and appropriate grammatical corrections for academic writing, as students wrote: *"It suggested vocabulary is often more precise (e.g., using "examine" instead of "see" for "melihat data"), helping avoid common errors in academic writing"* (Student 88). *"It benefits me lots, during the writing of my essay especially in terms of vocabulary precision and grammar accuracy."* (Student 26). *"DeepL benefits me in choosing suitable vocabulary that matches with my writings context;"* (Students 4). *"DeepL help me to find appropriate amd contextual vocabulary when I am writing. It is really beneficial especially for writing research proposal at the moment."* (Student 24).

Students also emphasized significant time savings in translation for writing when using DeepL, as students commented: “DeepL also helps with spell checking and saves time when I need to translate longer paragraphs.” (Student 34). “When using DeepL I can save time because sometimes I have difficulty finding the right vocabulary.” (Student 39). “DeepL also saves time, as the translations are already quite polished and only need small revisions.” (Student 90). “It really saves time and makes my writing more accurate.” (Student 67). The student also expressed concerns about over-reliance potential.. “DeepL is useful, but I don’t fully depend on it.” (Student 66).

Based on the results of quantitative and qualitative analysis of the use of DeepL in English writing activities, it can be concluded that DeepL has proven to be highly successful in improving various aspects of students' English writing performance, with the most meaningful benefits in contextual vocabulary selection, grammar correction, mechanical precision of writing, and time efficiency in the translation and writing process.

Table 5. Students' Attitudes Toward Using

No. Item	Statements	Mean	Std. Dev.
15	Using DeepL to translate Indonesian to English for English writing classes is a good thing.	3.90	0.66
16	Using DeepL to translate Indonesian to English to write in English is a pleasant idea.	3.83	0.64
17	Using DeepL to translate Indonesian to English for English writing is an interesting idea.	3.84	0.69
18	DeepL has a positive impact on vocabulary enhancement for English writing.	3.92	0.67
19	I feel DeepL is useful for translating Indonesian to English for writing in English.	4.09	0.67
20	I don't think using DeepL is a trend in translating Indonesian to English for writing in English.	2.93	0.89
MEAN		3.75	

In regard to the Attitude Toward Using (ATU) construct, students demonstrated a very positive attitude toward using DeepL to translate from Indonesian to English in writing classes. The item with the highest rating indicates that students have a very positive attitude toward the practical benefits of using DeepL in their academic context. Meanwhile, the other four items received the "High" category, addressing students' overall perceptions and attitudinal responses toward DeepL usage. These results revealed that students maintain consistently positive attitudes toward DeepL across multiple evaluative dimensions, showing strong agreement that using DeepL is beneficial, enhances vocabulary development, represents a good and interesting translation tool, also provides a pleasant experience, indicating favorable attitudes toward DeepL as a translation tool.

Notably, Item 20 received the lowest mean score qualifying as 'Medium.' Since this is a reverse-scored negative item, this score indicates that students have a moderate level of agreement with the negative statement that DeepL use is not a trend. This suggests that students are somewhat neutral or uncertain about whether DeepL represents a trending practice to use as a translation

tool from Indonesian to English in English writing activities, with fairly diverse opinions among respondents.

This is further clarified by the qualitative findings which illustrate that students have a high level of trust in using DeepL while maintaining manual review of translation outputs, as students wrote: *“I find it reliable for getting the general meaning of a text, and while I sometimes need to adjust the wording to make it sound more natural in English.”* (Student 28). *“DeepL sometimes helps me check vocabulary and grammar when I translate my Indonesian ideas into English for writing classes like Essay Writing or Research Proposal. For example, when I don’t know the best word to use in context, I try DeepL to see different word choices. But honestly, I still need to fix the sentence by myself because sometimes the translation sounds unnatural or too formal.”* (Student 66). Furthermore, some students preferred DeepL over Google Translate *“Quite good actually better than Google Translate”* (Student 51). *“DeepL often provides more accurate vocabulary choices than other tools such as Google Translate.”* (Student 112).

Based on the results of quantitative and qualitative analysis, it can be concluded that students have a highly positive perception of DeepL as a useful translation tool for their English writing and superior to similar machine translation (MT) tools such as Google Translate.

Table 6. Students' Behavioral Intention to Use

No. Item	Statements	Mean	Std. Dev.
21	I plan to continue to use DeepL to translate Indonesian to English for English writing.	3.78	0.69
22	I intend to use DeepL to improve my translation abilities for English writing.	3.73	0.72
23	I always try to use DeepL to translate Indonesian to English on various writing occasions/cases, especially in writing classes.	3.56	0.92
24	I will often use DeepL to translate Indonesian to English for writing in English, especially in writing classes.	3.62	0.83
25	I expect my use of DeepL to translate Indonesian to English in English writing to continue in the future.	3.70	0.79
26	DeepL has limited functions and uninteresting translations that I wouldn't prefer to use in the future.	3.03	0.91
27	I will strongly recommend other students to use DeepL to translate Indonesian to English for English writing.	3.91	0.75
MEAN		3.62	

Based on data analysis, the Behavioral Intention to Use (BIU) construct revealed that students have a very high intention to continue using DeepL. The highest-rated item was students' willingness to recommend DeepL to others (mean 3.91), showing strong satisfaction and trust in the tool. Five other items in the "High" category covered continued usage plans, skill improvement intentions, future usage expectations, usage frequency in English writing class, and efforts to use DeepL in various writing opportunities. These results revealed that students consistently show positive intentions toward using DeepL, demonstrating commitment to the tool across various contexts and indicating sustained usage rather than temporary interest.

Interested to note, item 26 about functional limitations and uninteresting translations received the lowest score. This indicates that, based on reverse scoring, some students disagree that there are limitations in DeepL's functions and translation results. In other words, students consider

DeepL offers useful features and interesting translation results, and they remain interested in using it in the future, with quite diverse opinions among respondents.

This strong intention is reinforced and provided context by the qualitative findings that students' intentions are not simply desires but strategic plans to integrate DeepL into their academic workflows, particularly for important tasks such as course assignments and thesis writing. Qualitative findings showed students' strong intention to continue using DeepL for future assignments and thesis writing, as students wrote: *“For me DeepL is very helpful at that time until now too.”* (Student 35). *“DeepL very helpful for me, because I use for my mostly subject in class, to help me get more grammar understanding and also the spelling some word.”* (Student 7). *“I quite routinely use DeepL during the process of college, until now for the process of thesis.”* (Student 92).

Based on the results of quantitative and qualitative analysis, it can be concluded that students show a very strong intention to continue using DeepL in the future to translate Indonesian into English for English writing activities, and even recommend it to their peers, as they view DeepL as a strategic tool that will be integrated into their academic workflow, particularly for important tasks such as thesis completion and various writing courses.

Significant Differences in Perception Between Male and Female Students

Given the nature of the measurement scale utilized, the Mann-Whitney U test was chosen to analyze whether there were statistically significant differences between the perceptions of male and female students in semesters 6 and 8 of the 2024/2025 academic year from the English Education Study Program at Tanjungpura University. This non-parametric test allows for the comparison of two independent groups without assuming the normality of the data distribution.

Table 7. Rank Calculation of The Overall Score

Ranks		N	Mean Rank	Sum of Ranks
Score	Group 1 (Male)	31	61.84	1917.00
	Group 2 (Female)	86	57.98	4986.00
Total		117		

Table 8. Mann-Whitney U of The Overall Score

Test Statistics ^a	
	Score
Mann-Whitney U	1245.000
Wilcoxon W	4986.000
Z	-.544
Asymp. Sig. (2-tailed)	0.587
a. Grouping Variable: Group	

The complete Mann-Whitney U test results from SPSS analysis for the overall score obtained results with a U value of 1245.000, Z = -.544, and p-value = 0.587. These results indicate that the null hypothesis (H_0), which states that there is no difference in perception between male and female students, is accepted, as the p-value (0.587) is greater than the significance level $\alpha = 0.05$. Therefore, the alternative hypothesis (H_1), which assumes a difference in perception based on gender, is rejected. The Z value of -.544 indicates that the effect of the difference between groups is very small and practically insignificant, so it can be concluded that there is no significant difference in perception between male and female students in this research.

Discussion

The findings related to Perceived Ease of Use shows consistency with the research by Liang (2024), which also found that ease of use is a crucial factor in the adoption of DeepL for writing activities, where students found DeepL to be a user-friendly and accessible tool, especially benefiting students with its straightforward interface and helpful interchangeable word feature that enhances vocabulary and writing quality. It is also in line with Laksana and Komara (2024) that features of DeepL such as quick file translation and a user-friendly interface, were mentioned by students as benefits that improve productivity and convenience. However, the limitations of the free version, such as word limits and restricted access to premium features, emerge as the primary obstacles that impact the overall students' experience. This identified limitation found in this study, especially regarding the word limit, is also in line with research by Hariroh and Hamdani (2025) that the need for a premium subscription in using DeepL to translate lengthy documents like journals or reports presents an affordability obstacle for some students.

In terms of Perceived Usefulness, the results are in line with various previous studies that emphasize the benefits of DeepL for writing. The alternative word features offered by DeepL enhance the effectiveness of selecting contextual vocabulary, as students highlighted the importance of DeepL's feature that provides synonyms or changeable vocabulary, particularly valuable in educational contexts (Liang, 2024). Research by Kirana et al. (2024) found that DeepL was seen as a valuable language learning tool that helped students improve students' sentence structure and grammar, while also expanding their English vocabulary through accurate translations and suitable word suggestions. Also, most students found that DeepL significantly sped up their translation process by allowing them to translate entire texts at once, enabling them to focus more on content analysis and writing (Hariroh & Hamdani, 2025). However, students maintain a thoughtful attitude by not relying entirely on this tool to ensure an optimal learning process. This is in line with research by Laksana and Komara (2024) that others worried its ease of use for quickly defining difficult terms could lead to dependency, making it more convenient than traditional dictionaries.

Students showed a highly positive attitude towards using DeepL. The results are in line with the study by Laksana and Komara (2024) that students were satisfied with the use of DeepL, which was helpful for writing assignments and tasks. Additionally, Wang and Ke (2022) showed that students feel that using machine translation helps them feel less anxious and more confident when writing, while enhancing their self-confidence and self-efficacy. Also, the finding that DeepL outperforms other tools such as Google Translate is in line with research from Bunga & Katemba (2024), which found DeepL's translations to be more understandable, accurate, and error-free, and DeepL also outperformed Google Translate in features, speed, and ability to maintain context and nuance. However, they maintain a critical attitude by manually reviewing the translation results to avoid over-reliance and ensure the quality of natural writing. This is in line with Kirana et al. (2024) that students can improve the quality and accuracy of their writing by double-checking their original text compared to the DeepL Translator version, which helps them identify and correct potential errors. This shows that their positive attitude is accompanied by the awareness to use the tool wisely without hindering the learning process.

In terms of Behavioral Intention to Use, the result is in line with research by Asmara and Kembaren (2024) that students frequently use DeepL Translator for their thesis and journals due to its highly accurate and effective translation results, which they find superior to other machine translation tools. This indicates a deeper level of adoption of integrating DeepL into the strategic academic workflow by students.

Furthermore, analysis using the Mann-Whitney U test contrasts with research by Qazi et al. (2022) that females utilize learning tools and access information technology more frequently than males. Also, in contrast with Shaouf and Altaqqi (2018) that the perception of usefulness (PU) is often more significant for males, but perceived ease of use (PEOU) is more significant for women. But the results of this study are in line with a study by Iddrisu et al. (2025) that both male and female students perceived an effective sophisticated technology as a writing tool with no significant gender-based differences. It is also in line with Abdalhussein (2021) that there was no substantial gender difference in their use of Neural Machine Translation (NMT). Thus, the benefits provided by DeepL make it a tool that is accepted equally by both genders. There were no significant differences in performance, perceived value, or desire to continue using machine translation between male and female learners (Huang et al., 2025).

CONCLUSION

This study aims to investigate the perceptions of students in the 6th and 8th semesters of the academic year 2024/2025 of English Language Education Study Program at Universitas Tanjungpura towards the use of DeepL as a machine translation tool in English writing activities with the theory of Technology Acceptance Model by Davis (1989). This research uses a mix-method approach, which based on quantitative and qualitative data analysis, it can be concluded that the results show that DeepL is perceived as highly user-friendly (PEOU) due to its simple interface and fast process, although there are feature limitations on the free version. Students also found DeepL highly useful (PU) in improving the quality of writing, particularly in contextual vocabulary acquisition and grammar improvement, as well as increasing productivity.

This generates a highly positive attitude (ATU) towards using DeepL, where students not only trust the tool but also use it critically with manual review. Therefore, there is a highly positive behavioral intention (BIU) to continue integrating DeepL into their academic workflow. Interestingly, this study found no significant difference in the perceived use of DeepL based on gender, indicating an equal acceptance among college students. Overall, DeepL proved to be a highly accepted and rated useful translation tool by upper-semester university students.

ACKNOWLEDGMENTS

The authors would like to express sincere gratitude to the research supervisor for the invaluable guidance and constructive feedback throughout this study. Appreciation is also extended to all participants and class coordinators from the 2021 and 2022 of the English Language Education Program at Universitas Tanjungpura for their kind assistance in facilitating the data collection process.

REFERENCES

- Abdalhussein, H. F. (2021). Relationship between gender difference and students' perceptions of Google Translate use and accuracy along with difficulties. *Review of International Geographical Education Online*, 11(5). <https://doi.org/10.48047/rigeo.11.05.120>
- Asmara, D. S. M., & Kembaren, F. R. B. (2024). Student's perception towards the use of DeepL translator in writing thesis or journal for English education students. *IJLECR - International Journal of Language Education and Culture Review*, 10(1), 117–126. <https://doi.org/10.21009/ijlecr.v10i1.47937>
- Brezavšček, A., Šparl, P., & Žnidaršič, A. (2017). Factors influencing the behavioural intention to use statistical software: The perspective of the Slovenian students of social sciences.

- Eurasia Journal of Mathematics, Science and Technology Education*, 13(3).
<https://doi.org/10.12973/eurasia.2017.00652a>
- Bunga, E. L. M., & Katemba, C. V. (2024). Comparing translation quality: Google Translate Vs Deepl for foreign language To English. *EDUSAINTEK: Jurnal Pendidikan, Sains Dan Teknologi*, 11(3), 1147–1171. <https://doi.org/10.47668/edusaintek.v11i3.1264>
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly: Management Information Systems*, 13(3), 319–339. <https://doi.org/10.2307/249008>
- Fadhillah, M., Flora Oktaviani, C., Cut, S., & Juniarti, L. (2025). A contrastive analysis of DeepL translation vs. Google Translate's performance in rendering academic texts: Insights from EFL learners. *Jurnal Serambi Ilmu*, 26(1). <https://doi.org/10.20473/jovin.v1i1.19873>
- Hariroh, F., & Hamdani, B. (2025). Analysis of DeepL application as an alternative media for translating academic assignments. *Professional Journal of English Education*, 8(2), 507–515.
- Huang, Z., Wang, P., Peng, L., Jin, H., & Liu, T. (2025). Exploring factors influencing learners' continuance intention to use machine translation tools: a chain mediation model. *Education and Information Technologie*.
- Iddrisu, H. M., Iddrisu, S. A., & Aminu, B. (2025). *Gender differences in the adoption , usage , and perceived effectiveness of AI writing tools : A study among university for development studies students*. 4(1), 100–111.
- Kahlon, N. K., & Singh, W. (2023). Machine translation from text to sign language: A systematic review. *Universal Access in the Information Society*, 22(1). <https://doi.org/10.1007/s10209-021-00823-1>
- Khairyah, P. N., Anastasya, M., & Natsir, R. Y. (2024). A phenomenological study of Dnglish education students ' perceptions of using DeepL pro for text translation. *IJM : Indonesian Journal of Multidisciplinary*, 2, 610–619.
- Kirana, A., Waty, F. R. K., & Rahman, B. I. (2024). The influence of DeepL translator on EFL students' writing. *Humaniora Dan Seni (JISHS)*, 02(4), 746–753. <http://jurnal.minartis.com/index.php/jishs>
- Kothari, C. R. (2004). Research methodology: Methods & techniques. In *New Age International (P) Ltd*. New Age International. <https://doi.org/10.1017/CBO9781107415324.004>
- Laksana, K. N., & Komara, C. (2024). Indonesian EFL students' perceptions of Deepl machine translation tool: Utilization, advantages, and disadvantages. *Journal of Language and Literature Studies*, 4(2), 256–276. <https://doi.org/10.36312/jolls.v4i2.1931>
- Leavy, P. (2017). Research design: Quantitative, qualitative, mixed methods, arts-based, and community-based participatory research approaches. In *Universitas Nusantara PGRI Kediri* (Vol. 01).
- Liang, L. (2024). The impact of using DeepL Translator on EFL students' writing. *Journal of China Computer-Assisted Language Learning*. <https://doi.org/10.1109/ICALT61570.2024.00043>
- Murtisari, E. T. (2021). Use of translation strategies in writing: Advanced efl students. *LLT Journal: Journal on Language and Language Teaching*, 24(1). <https://doi.org/10.24071/llt.v24i1.2663>
- Muyassaroh, S. (2022). Students' perception difficulties in Indonesian-English translation: A survey study to the fifth semester students. *JELLT (Journal of English Language and Literature Teaching)*, 7(1), 136–146.
- Oktaviani, S., Bahrani, & Noor, W. N. (2022). Students' perception towards the use of grammarly in English writing skill of fourth semester English education department at UINSI Samarinda in the academic year 2021/2022. *Jurnal Sultan Idris Pendidikan*

Profesi Guru (SIPPG), x(x).

- Poibeau, T. (2017). Machine translation. In *3D Printing*. The MIT Press. <https://doi.org/10.7551/mitpress/11800.003.0016>
- Qazi, A., Hasan, N., Abayomi-Alli, O., Hardaker, G., Scherer, R., Sarker, Y., Kumar Paul, S., & Maitama, J. Z. (2022). Gender differences in information and communication technology use & skills: a systematic review and meta-analysis. In *Education and Information Technologies* (Vol. 27, Issue 3). <https://doi.org/10.1007/s10639-021-10775-x>
- Retnomurti, A. B., Lustyantje, N., & Murtadho, F. (2024). Evaluation of Indonesian to English translation at the undergraduate level using componential assessment. *International Journal of Language and Ubiquitous Learning*, 2(2). <https://doi.org/10.70177/ijlul.v2i2.893>
- Samputra, M., Bunau, E., & Salam, U. (2024). Analyzing the translation quality of English to Indonesian translation between human translation. *Jurnal Pengembangan Ilmu Pengetahuan*, 05(4), 62–72.
- Sari, D. M. (2022). Islamic students' attitudes and perceptions toward learning English: A study from male-female students of STIT Madani Yogyakarta. *At Turots: Jurnal Pendidikan Islam*, 3(2). <https://doi.org/10.51468/jpi.v3i2.76>
- Shaouf, A., & Altaqqi, O. (2018). The impact of gender differences on adoption of information technology and related responses: A review. *International Journal of Management and Applied Research*, 5(1). <https://doi.org/10.18646/2056.51.18-003>
- Siahaan, E. B. (2020). Students' perception of Edmodo use as a learning tool. *JET (Journal of English Teaching)*, 6(1). <https://doi.org/10.33541/jet.v6i1.1061>
- Škobo, M., & Petričević, V. (2023). Navigating the Challenges and Opportunities of Literary Translation in the Age of AI: Striking a Balance Between Human Expertise and Machine Power. *Društvene i Humanističke Studije (Online)*, 8(2(23)). <https://doi.org/10.51558/2490-3647.2023.8.2.317>
- Strzelecki, A., & Arabawy, S. El. (2024). Investigation of the moderation effect of gender and study level on the acceptance and use of generative AI by higher education students: Comparative evidence from Poland and Egypt. *British Journal of Educational Technology*, 55(3). <https://doi.org/10.1111/bjet.13425>
- Telaumbanua, Y. A., Marpaung, A., Gulo, C. P. D., WijayaWaruwu, D. K., Zalukhu, E., & Zai, N. P. (2024). An analysis of two translation applications : Why is Deepl translate more accurate than Google Translate ? *Journal of Artificial Intelligence and Engineering Applications*, 4(1).
- Wang, J., & Ke, X. (2022). Integrating machine translation into EFL writing instruction: Process, product and perception. *Journal of Language Teaching and Research*, 13(1). <https://doi.org/10.17507/JLTR.1301.15>
- Weng, F., Yang, R. J., Ho, H. J., & Su, H. M. (2018). A TAM-based study of the attitude towards use intention of multimedia among school teachers. *Applied System Innovation*, 1(3). <https://doi.org/10.3390/asi1030036>
- Winarsih, R., Salam, U., & Riyanti, D. (2021). An analysis of students' language learning strategies in academic writing. *Jurnal JOEPALLT (Journal of English Pedagogy, Linguistics, Literature, and Teaching)*, 9(1). <https://doi.org/10.35194/jj.v9i1.1298>
- Yuzar, E., & Rejeki, S. (2020). The correlation between productive and receptive language skills: An examination on ADFELPS test scores. *SALEE: Study of Applied Linguistics and English Education*, 1(02). <https://doi.org/10.35961/salee.v1i02.111>