EFL Students' Perception of DeepL Translation Tool Utilization in Translating Scientific Published Research Articles

Ayu Arnita [1*], Maulina [2], Tri Indah Rusli [3]

[1 23] Universitas Muhammadiyah Kendari, Indonesia

*Corresponding author's email: ayu.arnita.13@umkendari.ac.id

ARTICLE INFO	ABSTRACT
	Artificial intelligence (AI) technology advancements have given us language learning tools like DeepL, renowned for its translation accuracy and fluency. Students often use DeepL to understand scientific published articles for the purpose of composing thesis paper in the final year of their study. However, research on students' perceptions of the use of DeepL, especially in the translation of scientific articles, is still limited. This study aims to explore the perceptions of tertiary EFL students towards DeepL utilization, particularly in helping them to understand scientific articles in English. This research used a qualitative approach with a case study design. Data were collected through in-depth interviews with final-year students who were selected using a purposive sampling technique. Data analysis was conducted using Braun and Clarke's (2006) thematic analysis method. The results showed that students have positive perceptions of DeepL because of its ability to translate complex academic terms, provide accurate and contextual translations, and accelerate understanding of academic literature. In addition, students consider DeepL is easy to use, accessible on various devices, and rarely experience technical problems. Most students plan to continue using DeepL in their academic studies and recommend it to their peers. This finding confirms that DeepL has an important role as a translation tool in supporting students' understanding of English scientific articles in thesis writing.

Introduction

In the digital era, technology has introduced major transformations in many areas of life, including education in general and English language learning (Rintaningrum, 2023). Currently, the technology that is often used is artificial intelligence (AI) technology (Laksana & Komara, 2024). The development of AI has produced various tools that meet the specific needs of language learning (Maulina et al., 2024). Translation applications such as DeepL, for example, have been widely used among students in higher education (Bunga & Katemba, 2024). Along with the rapid development of technology, these AI-based tools further help the learning process and help overcome the challenges of translating academic texts between languages (Rohmawaty et al., 2024). In addition, AI also aids in writing, making tasks such as essay writing and thesis proposals easier (Cummings et al., 2024). Within the domain of students learning English as a foreign language (EFL), understanding scientific literature in English is important, especially in thesis writing, which requires students to

access various scientific articles in English. Thus, it is important to explore EFL students' perceptions of using DeepL in this process.

Translation, according to Munday (2016), encompasses both the text being translated and the method by which the translator converts the original text into a different language. The procedure not only seeks to achieve equivalence in meaning but also assesses how effectively the translation serves the functional purpose of the target text (TT) (Munday et al., 2022). Translation holds considerable importance in English as a foreign language (EFL) as it entails the transformation of the source language into the target language. As technology advances, translation is expanding along with the times. According to S et al. (2016), since the early 2000s, many researchers and translation groups in various countries have adopted machine translation. With machine translation, the translation process will become easier and faster, as well as increasingly support language learning, so that they can translate texts for better understanding and practice (Bowker, 2020).

DeepL Translator has emerged as a popular translation tool alongside Google Translate, which is recognized for its accurate translations. This application utilizes Neural Machine Translation (NMT) technology to deliver precise and fluent translations (Naveen & Trojovský, 2024). DeepL also offers various translation features, including document translation and web page translation, as well as the ability to handle multiple language pairs, including English to Indonesian (Salsabila et al., 2024). In the context of thesis writing, EFL students often face difficulties in understanding English texts, especially scientific articles. This is due to the lack of vocabulary and understanding of grammar, so it becomes an ordinary problem they face (Munibi, 2023; Maulina, Nasrullah, et al., 2022; Rahim & Maulina, 2023). Therefore, with the accuracy and fluency of the translation results offered by DeepL, EFL students tend to use this application as an aid to understanding scientific articles in English. Because this application is not just a tool but also incredibly beneficial for language learning (Sidiq & Syafryadin, 2024). Furthermore, the conclusions align with the evaluation results reported in the research studies by Aguilar (2023) and Moisieieva et al. (2023), indicating that DeepL is recognized as a machine translation that delivers superior performance by committing fewer errors overall, resulting in higher quality translation compared to that of Google Translate.

Given the growing reliance of EFL students on DeepL to understand scientific articles in English, it is crucial to further investigate their perception of this application. As stated by Robbins and Judge (2013), perception refers to the process through which individuals organize and interpret their sensory experiences to impart meaning to their surroundings. Perception plays a significant role in deciding how a person assesses and uses an application, including this DeepL translation tool. In this case, a commonly used theory in measuring and determining the perceived use of an application is TAM (Technology Acceptance Model), which was developed by Davis (1989) to explain and assess user acceptance of technology, which is determined by several factors: perceived usefulness refers to the extent to which an individual believes that utilizing technology will enhance their performance effectiveness, perceived ease of use describes the degree to which a person feels that employing technology simplifies their task, and behavioral intention to use indicates a person's intention to engage

with the technology they have decided to adopt (Marikyan & Papagiannidis, 2024; Maulina et al., 2023; Maulina, Ignacio, et al., 2022). Based on this, understanding how DeepL users perceive the tool is crucial when carrying out research aimed at identifying its benefits and ease of use.

Figure 1 DeepL Translation Acceptance Model the adaption in TAM model
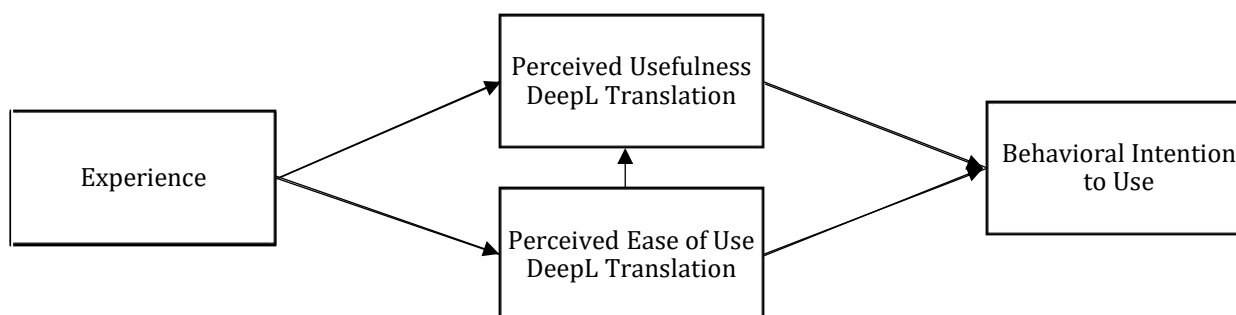
Related research on students' perceptions of using DeepL in translation has been conducted by several researchers. For example, Laksana and Komara (2024) investigated Indonesian EFL students' perception of DeepL Machine Translation, aiming to offer a thorough comprehension of their experiences and insights into using this tool. Then, Munawwarah's (2024) research explored students' perception of the DeepL application as a translation machine in English language learning. The results showed that in general, students have good and incredibly good perceptions in terms of students' knowledge of translation, usability, and ethics of using DeepL. Furthermore, Sidiq and Syafryadin (2024) examined the perceptions of Bengkulu University students towards DeepL as a translation tool, especially among psychology students in writing English texts.

In addition, Khairyah et al. (2024) and Salsabila et al. (2024) showed that DeepL was effective in improving their translation skills and aiding reading comprehension. Some other researchers, such as Birdsell (2022), Kirana et al. (2024), and Polakova and Klimova (2023), focused more on using DeepL for students' writing in general. Previous studies have extensively explored using of DeepL as a translation tool for general tasks, especially in perception. However, this study differs from these previous studies as it explores how DeepL can assist EFL students in navigating language obstacles, especially when comprehending the meaning of the English scientific articles used in thesis writing. In addition, this study also differs from previous studies in that it uses the TAM (Technology Acceptance Model) theory to analyze students' perceptions. Specifically, it focuses on final-year students at Universitas Muhammadiyah Kendari as its participants.

Thesis writing requires the ability to understand scientific articles, especially English scientific articles. Many EFL students at tertiary level face difficulties in understanding English academic texts, especially the challenge of understanding English scientific articles. In this case, translation tools such as DeepL can play a significant role. The primary objective of this research is to explore the perceptions of EFL students at tertiary level towards the use of DeepL as a translation tool in translating scientific articles for thesis writing. This

study specifically aims to analyze perceived usefulness, perceived ease of use, and behavioral intention to use. Thus, this study will provide an overview of the extent to which DeepL is accepted and used by students following the Technology Acceptance Model (TAM) framework.

This study has a considerable effect and needs to be discussed since it can provide benefits in improving translation quality and students' professionalism in translating English academic texts. In addition, this study can offer important understandings regarding the process of translation technologies, such as DeepL, that can be incorporated into language instruction, thereby assisting students in becoming better prepared for future academic demands.

Research Methods

This research uses a qualitative method to thoroughly comprehend how DeepL is utilized as a tool. A case study approach was employed to examine how these students utilize translation techniques, especially highlighting their experiences with DeepL while translating articles for their thesis. Qualitative methods allow for a thorough examination of participants' subjective experiences and views, thus enabling a detailed investigation into the use of translation tools (Creswell & Creswell, 2018).

The subjects in this study were final-year students majoring in English Language Education at one of the tertiary-level institutions in Indonesia, Universitas Muhammadiyah Kendari. A purposive sampling technique was employed to choose the participants most inclined to provide relevant and valuable insights (Campbell et al., 2020). Based on the initial data collection, five participants are relevant to the use of DeepL in translating articles for thesis writing.

Table 1 Demographics of Research Participants

Code	Gender	Age	Frequency of Using DeepL
P1	Female	21	Often
P2	Female	22	Often
P3	Female	24	Often
P4	Female	24	Often
P5	Female	22	Often

Data was collected using in-depth interviews. In-depth interviews are one of many qualitative research techniques used to collect data on subjective experiences (Rutledge & Hogg, 2020). It aims to obtain a better understanding of how students utilize the app, concentrating on specific elements of their translation practice. The interviews were conducted face-to-face to create direct interaction between the researcher and the participants, allowing for more in-depth data collection. Before conducting the interviews, the instrument was validated by two experts in the field of translation. These experts assessed the questions regarding clarity, relevance, and their ability to elicit meaningful responses from participants. Based on their feedback, minor revisions were made to improve the precision of the wording and ensure alignment with the study's objectives. This

validation process confirmed that the instrument was appropriate for exploring students' perceptions of DeepL.

Before the interview session took place, each participant was given an explanation of the purpose of the research, their rights as a participant, and the guarantee of data confidentiality. After understanding the information, participants were asked to read and sign an informed consent form as a form of their willingness to participate in the study.

Following the validation, participants were asked several semi-structured questions designed to explore their experiences of using DeepL as a translation tool. The questions focused on specific aspects of the participants' translation practices, including the benefits, ease of use, and behavioral intention to use DeepL in helping to understand English scientific articles.

Data obtained through face-to-face interviews was analyzed using thematic analysis by Braun and Clarke (2006). This data analysis includes six phases, namely familiarizing yourself with your data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the report. To maintain the validity and reliability of the analytical findings, member checking was implemented. Member checking involves the researcher requesting that one or more participants verify the accuracy of the report (Candela, 2019).

Findings

Based on the thematic data analysis conducted in this study, three main themes were found that reflect EFL students' perceptions of using DeepL as a tool for translating English scientific articles for thesis writing. These three themes reflect the main factors in the Technology Acceptance Model (TAM) (Davis, 1989), namely perceived usefulness, perceived ease of use, and behavioral intention to use.

Perceived Usefulness

The theme of perceived usefulness refers to the extent to which students feel that the use of DeepL helps them understand scientific articles and improves efficiency in their academic studies. In this study, EFL students perceived DeepL as a very useful tool in helping them understand English scholarly articles and also their academic understanding, both in dealing with complex academic terms, providing accurate translations, accelerating understanding of literature, and as a tool in research.

DeepL Helps Understand Difficult Academic Terms

Based on the interview results, EFL students revealed that DeepL makes it easier to understand academic terms that are difficult to understand when reading scientific articles in English. The participants' statements are as follows:

DeepL helped me understand difficult scientific articles, especially in my research field of English movie viewing habits and vocabulary acquisition. Many of the articles I use contain quite complex linguistic and educational terms. (P1)

Scientific articles often use technical terms or complex sentences that are difficult to understand directly. With DeepL, I can get natural and easy-to-understand translations. (P2)

Overall, the findings show that students perceive significant benefits from using DeepL in understanding complex academic terms, whether in words, technical phrases, or complex sentences. With DeepL, students can focus more on analyzing the content of articles without experiencing significant language barriers.
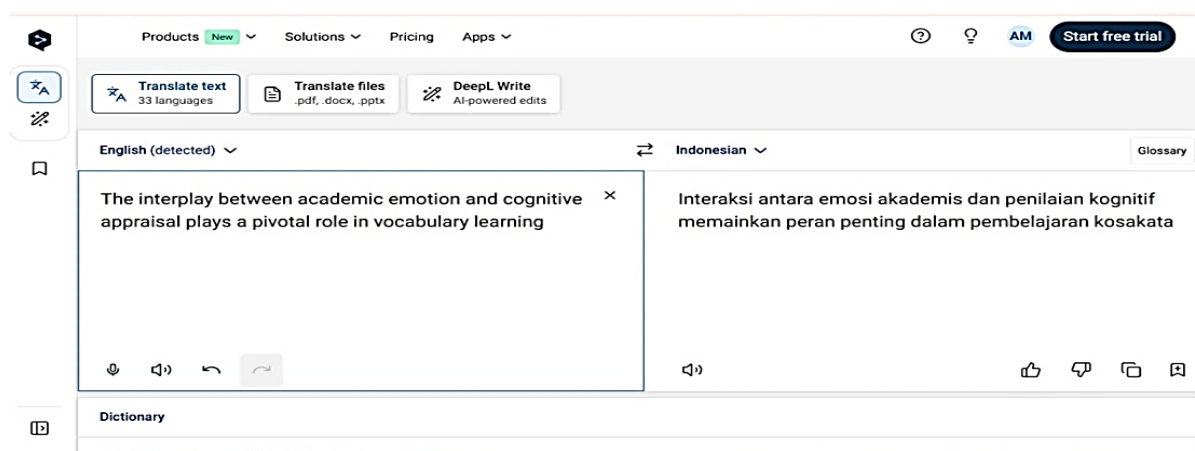
DeepL Provides Accurate and Contextual Translations

Based on the interview results, EFL students stated that DeepL provides accurate translations suitable for the academic context. DeepL can also maintain the original meaning, produce natural translations, and help students understand complex terms and concepts in English scientific articles. The following are statements from the participants:

In my opinion, the accuracy of DeepL is excellent because it can translate academic sentences while maintaining the original meaning. Compared to other tools, DeepL better understands the context, so the results are more natural and less rigid. (P1)

To demonstrate how DeepL produces accurate translations while maintaining academic context, Participant 3 gave a live example using the DeepL application to translate a sentence from an article he read.

Figure 2 Documentation of DeepL translation of the article read by Participant 3

Overall, the findings show that EFL students recognize DeepL as an accurate and contextual translation tool capable of conveying the academic meaning of the original text. With more natural and contextually appropriate translations, students can understand the content of scientific articles more accurately and quickly without needing to revise the translations extensively.

DeepL Accelerating Understanding of Academic Literature

Based on the interview results, the EFL students in this study revealed that DeepL helps them save time reading and understanding English scientific articles, especially when they have to read many articles in a limited time. The statements from the participants are as follows:

...before using DeepL, it often took me hours to understand one article by manually looking up the meaning of difficult terms. However, with DeepL, I can directly translate the difficult sections and gain a faster understanding. (P1)

DeepL automatically translates complex paragraphs so that I do not have to translate word by word manually. The automatic translation allows me to focus directly on content analysis and the relationship between theories... (P3)

Overall, the findings suggest that DeepL is essential in accelerating students' comprehension of academic literature. With fast and accurate translations, students not only save time but can also focus more on content comprehension and academic analysis without being hampered by translating complex terms or sections of text.

DeepL as a Tool for Academic Research

Based on the interview results, the EFL students in this study revealed that DeepL is very helpful in academic research. It makes it easier for them to understand and analyze international literature, thus speeding up their research process. The participants' statements are as follows:

...due to the advantages of natural and accurate translation, DeepL supports me in understanding the important information that I read in the international literature that I use in my research. (P3)

DeepL helps me understand scientific articles because it supports my research and study activities. I feel that DeepL is the right solution to help overcome the language barrier in academic research. (P4)

Overall, the findings indicate that DeepL acts as an effective tool in students' academic research, as it not only helps them understand scientific literature quickly and accurately but also maintains the academic structure and logic of arguments in articles. With the help of DeepL, students can focus more on analyzing and synthesizing information in their research without having to spend time manually translating academic texts.

Perceived Ease of Use

The perceived ease of use theme reflects the extent to which students feel that DeepL is easy to use without significant technical barriers. In this study, EFL students reported that they had no difficulty in operating DeepL and felt that the tool was easily accessible.

DeepL Easy to Use with No Additional Training

Based on the interview results, the EFL students in this study revealed that DeepL is very easy to use from the first time without requiring additional training. The participants' statements are as follows:

The features of DeepL are easy to understand without additional training. The simple and intuitive interface allowed me to use it smoothly from the first time without assistance. (P1)

I don't need any special training to use it. Just copy and paste, and the results appear immediately. (P2)

Overall, the findings show that DeepL is very easy to use even for first-time students as it has an intuitive interface, simple features, and a direct and fast translation process. With this convenience, students can focus on translating academic texts without having to spend time learning how to use the tool first.

DeepL Simplifies the Instant Translation Process

Based on the interview results, the EFL students in this study revealed that DeepL greatly facilitates the instant translation process, both for short texts and longer academic documents. The participants' statements are as follows:

The experience of using DeepL is very smooth, especially when translating long documents. The feature for document translation supporting PDF/DOCX files makes the translation process easier without manually copying the text. (P2)

Based on my experience, using DeepL is easy whether it is translating in paragraphs, documents, or just one sentence. When I translated an article into PDF form, I just pressed the document feature and entered the file; within seconds, the results appeared. Of course, the appearance of the file we entered earlier did not change after being translated. (P3)

Figure 3 Documentation of the results of using the document translation feature of DeepL by Participant 3

Overall, these findings show that DeepL significantly facilitates instant translation, both for short texts and academic documents in PDF or DOCX format. With simple and fast features that do not change the original document layout, students can translate academic texts more efficiently without significant technical barriers.

Students Rarely Experience Technical Problems in Using DeepL

Based on the results of the interviews, the EFL students in this study stated that they rarely experience technical problems when using DeepL but rather feature limitations in the free version. The participants' statements are as follows:

I rarely experience difficulties when using DeepL and probably rarely. I have never needed technical support. (P1)

So far, I have not experienced any difficult obstacles when using DeepL. (P4)

There are no real difficulties. The only issue is when using the document feature, there is a limit of three translations a day, and DeepL immediately suggests using the premium version. (P3)

Overall, these findings show that students rarely experience technical challenges when using DeepL. The challenges are more related to the limitations of the free version's features rather than difficulties in operating DeepL itself. These findings suggest that DeepL is a stable, easy-to-use translation tool with minimal technical challenges for students in their academic endeavors.

DeepL Easily Accessed on Multiple Devices

Based on the interview results, the EFL students in this study stated that DeepL can be accessed easily on various devices, such as laptops and cellphones, and can run smoothly as long as the internet connection is stable. They considered that this flexibility makes DeepL more practical to use at any time, whether at home, on campus, or elsewhere. The participants' statements are as follows:

Yes, the devices I use (laptop and mobile phone) with a stable internet connection are very suitable for using DeepL. The application and web version run smoothly on my device. (P1)

I use DeepL on my laptop and cell phone, and so everything is running smoothly. With a stable internet connection, I can translate articles whenever needed, both at home and on campus. (P4)

Overall, these findings show that DeepL is a translation tool that is easily accessible on various devices and runs smoothly as long as there is a stable internet connection. This flexibility allows students to translate academic texts anytime and anywhere, without experiencing technical constraints in accessibility.

Behavioral Intention to Use

The theme of behavioral intention to use. In this study, EFL students who felt the benefits and convenience of using DeepL had the intention to continue using it and recommend it to friends.

Students Plan to Continue Using DeepL in Academic Studies

Based on the interview results, the EFL students in this study stated that they plan to continue using DeepL in their academic studies, especially in understanding English scientific literature and supporting research.

Of course, I plan to continue using DeepL because it is very helpful in the research process, especially for understanding foreign literature, which is the main reference. (P1)

Of course, I plan to continue using DeepL for future research because of its efficiency and accuracy. This tool is an important part of the literature review process and thesis writing. (P2)

Overall, the findings show that the majority of students have the intention to continue using DeepL in their academic studies, as this tool provides convenience in understanding the scientific literature, speeds up the research process, and overcomes language barriers.

Students Tend to Recommend DeepL to Academic Colleagues

Based on the interview results, the EFL students in this study stated that they are likely to recommend DeepL to their academic colleagues, mainly because of its high translation accuracy, ease of use, and usefulness in understanding academic articles. Many students have recommended or plan to recommend DeepL to their friends who have difficulty reading English journals.

I would recommend it. DeepL can be a solution for students who have difficulty understanding English articles because it provides more accurate and natural translations compared to other tools I have tried. (P3)

Of course, I would recommend DeepL to my friends because its translation accuracy is better than other translation tools. In addition, DeepL understands the academic context better and produces more natural translations. (P4)

Overall, these findings show that students are not only satisfied with DeepL but are also likely to recommend it to their academic peers. With more accurate translation quality, better understanding of academic context, and ease of use, DeepL is considered a useful tool for students who need support in understanding English academic literature.

Discussion

This study aims to explore EFL students' perceptions towards using the translation tool DeepL in the context of thesis writing. Based on the results, three main themes were found to reflect students' perceptions of DeepL, namely perceived usefulness, perceived ease of use, and intention to reuse. These findings are in line with the Technology Acceptance Model (TAM) proposed by Davis (1989), which explains that technology acceptance by users is influenced by these factors.

The EFL students in this study found DeepL to be a very useful tool in helping them understand English scientific articles. One of the main challenges in reading academic literature is understanding complex and technical academic terms (Maulina et al., 2024; Saputra et al., 2021). DeepL helps students overcome this obstacle by providing accurate and contextualized translations. This is in line with Sidiq and Syafryadin's (2024) research, which shows that DeepL can provide a more natural translation than other translation tools. Thus, students can focus more on analyzing the content of the article without being distracted by difficulties in understanding the source text.

In addition to providing accurate translations, DeepL also contributes to accelerating the comprehension of academic literature. Students often have to read a lot of literature in a limited time, and with DeepL's instant translation feature, they can save time in reading and understanding the content of the article. This is consistent with the research of Khairyah et al. (2024), which showed that the use of DeepL was effective in improving students' reading

and comprehension skills. Thus, DeepL not only helps in translating texts but also supports a more efficient academic process.

The superiority of DeepL in producing translations that are natural and appropriate to the academic context is a major factor that makes students feel helpful in their studies. Accurate translations allow students to focus on the substance of the research without having to spend time manually revising the translations. This finding is in line with the research of Moisieieva et al. (2023), which states that DeepL produces higher quality translations compared to Google Translate. Therefore, students are more confident in using DeepL to support their research.

Ease of use is also one of the important factors that make students interested in using DeepL. In this study, students reported that DeepL is very easy to use without requiring additional training. The simple and intuitive interface allows them to use DeepL immediately without experiencing technical difficulties. Students were able to use DeepL right from the first time without the need to read a guide or take special training. The features provided, such as text and document translation, are very accessible and require no additional instruction. This finding is in line with Munawwarah's research (2024), which states that DeepL has a user-friendly interface and is easy to understand.

In addition to its ease of use, DeepL also has a document translation feature that is very helpful for students in understanding academic articles in PDF or DOCX format. By maintaining the original layout of the document, students can read the translation more comfortably and effectively. This follows the research of Salsabila et al. (2024), which shows that the document translation feature on DeepL makes it easier for students to translate academic texts efficiently.

Although there are some limitations in the free version of DeepL, such as a limit on the number of words that can be translated and paid premium features, students in this study did not consider it a significant obstacle. They still felt that the benefits gained from DeepL far outweighed the limitations. This finding is in line with the research of Kirana et al. (2024), who stated that DeepL is a stable and easy-to-use translation tool, despite the limitations of the free version.

Flexibility of access is also a major supporting factor in the use of DeepL. Students can access DeepL through various devices, such as laptops and cellphones, as long as they have a stable internet connection. This ability allows students to use DeepL anytime and anywhere, whether at home, on campus, or in other places. This is by Polakova and Klimova's research (2023), which shows that DeepL can be used flexibly on various devices.

With the perceived benefits and convenience, students in this study have a strong intention to continue using DeepL in the future and recommend it to their academic colleagues. Students plan to continue using DeepL in their academic studies, especially in understanding English scientific literature and supporting research. The main factors that encourage them to keep using DeepL are the ease, efficiency, and accuracy of translation offered by this tool. This finding is in line with Marikyan and Papagiannidis' (2024) research,

which shows that intention to use technology is influenced by perceived usefulness and convenience.

In addition to using DeepL for personal use, students also tend to recommend this tool to their academic colleagues. This is due to the better translation quality compared to other tools, its ease of use, and its benefits in understanding academic articles. DeepL is considered an effective solution for students who have difficulty reading English journals. This finding is in line with Sidiq and Syafryadin's (2024) study, which showed that students tend to recommend DeepL to their friends because of its better translation quality.

Overall, this study shows that DeepL is a very useful translation tool for EFL students to understand English scientific articles. With its ease of use, translation accuracy, and ability to speed up literature comprehension, DeepL can be an effective support tool in academic studies. Students not only find it helpful in understanding complex academic terms but also have a strong intention to continue using DeepL in the future and recommend it to their academic peers. Thus, DeepL has the potential to be one of the main tools that support students in improving their reading and comprehension skills of academic literature in the context of writing their thesis.

Conclusion

This study shows that DeepL is a very useful translation tool for EFL students in understanding English scientific articles, especially in the context of thesis writing. Based on the analysis, three main aspects were found to reflect students' perceptions of DeepL: perceived usefulness, perceived ease of use, and behavioral intention to use.

In the aspect of usefulness, students felt that DeepL helped them in understanding complex academic terms, producing accurate and contextual translations, and accelerating the understanding of academic literature. By using DeepL, students can focus more on analyzing the content of articles without experiencing significant language barriers. In addition, DeepL also helps students in the research process by providing easier access to international literature.

In terms of ease of use, students rated that DeepL has a simple and intuitive interface, allowing them to use it without the need for additional training. The text and document translation features provided are very accessible and efficient, allowing students to translate academic articles quickly and without significant technical barriers. In addition, the flexibility of access across various devices also enhances users' convenience in accessing DeepL anytime and anywhere.

In the aspect of intention to reuse, students who have experienced the benefits and convenience of DeepL have a strong desire to continue using it in their academic studies. In addition, they also tend to recommend DeepL to their academic colleagues because of the better translation quality compared to other translation tools, as well as the convenience and efficiency offered.

The findings have implications for higher education, especially in supporting EFL students in understanding English academic literature more efficiently. Educational institutions can consider integrating AI-based translation tools such as DeepL in the academic curriculum to improve accessibility to scholarly literature. In addition, further research could explore the effectiveness of DeepL in various disciplines as well as how this tool can be combined with more comprehensive language learning strategies. Thus, the utilization of translation technology can continue to be developed to improve student's academic skills in an increasingly global learning environment.

References

Aguilar, A. P. (2023). Challenging machine translation engines: some Spanish-English linguistic problems put to the test. *Cadernos de Traducao*, 43(1), 1–26. https://doi.org/10.5007/2175-7968.2023.e85397

Birdsell, B. (2022). Student writings with DeepL: teacher evaluations and implications for teaching. *JALT Postconference Publication, 2021*(1), 117. https://doi.org/10.37546/jaltpcp2021-14

Bowker, L. (2020). Machine translation literacy instruction for international business students and business English instructors. *Journal of Business and Finance Librarianship,* 25(1–2), 25–43. https://doi.org/10.1080/08963568.2020.1794739

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101. https://doi.org/10.1191/1478088706qp063oa

Bunga, E. L. M., & Katemba, C. V. (2024). Comparing translation quality : google translate vs DeepL for foreign language to English universitas advent Indonesia , Indonesia Although so many people around the world use only their mother tongue as the basis of their daily language , no government t. *Edusaintek: Jurnal Pendidikan, Sains Dan Teknologi*, 11(3), 1147–1171. https://doi.org/https://doi.org/10.47668/edusaintek.v11i3.1264

Campbell, S., Greenwood, M., Prior, S., Shearer, T., Walkem, K., Young, S., Bywaters, D., & Walker, K. (2020). Purposive sampling: complex or simple? research case examples. *Journal of Research in Nursing*, 25(8), 652–661. https://doi.org/10.1177/1744987120927206

Candela, A. G. (2019). Exploring the function of member checking. *Qualitative Report*, 24(3), 619–628. https://doi.org/10.46743/2160-3715/2019.3726

Creswell, J. W., & Creswell, J. D. (2018). *Research design qualitative, quantitative, and mixed methods approaches* (Fifth). SAGE Publications.

Cummings, R. E., Monroe, S. M., & Watkins, M. (2024). Generative AI in first-year writing: an early analysis of affordances, limitations, and a framework for the future. *Computers and Composition*, 71, 102827. https://doi.org/10.1016/j.compcom.2024.102827

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly: Management Information Systems*, 13(3), 319–340.

Khairyah, P. N., Anastasya, M., & Natsir, R. Y. (2024). A phenomenological study of English education students' perceptions of using DeepL pro for text translation. *IJM : Indonesian Journal of Multidisciplinary*, 2, 610–619.

Kirana, A., Repelita, F., Kembaren, W., Ichsanda, B., & Hz, R. (2024). The Influence of deepl translator on EFL students' writing. *Humaniora Dan Seni (JISHS)*, 02(4), 746–753.

Laksana, K. N., & Komara, C. (2024). Indonesian EFL students' perceptions of DeepL machine translation tool : utilization , advantages , and disadvantages. *Jolls: Journal of Language and Literature Studies*, 4(2), 256–276. https://doi.org/https://doi.org/10.36312/jolls.v4i2.1931

Maulina, Hastianah, & Herianah. (2023). Undergraduate students ' perception of the use of WhatsApp-Based speaking instructional materials. *Indonesian Tesol Journal*, 5(1), 58–75.

Maulina, Ignacio, J. F., Bersabe, L. A. C., Serrano, A. J. D., Carpio, N. G., & Santos, E. G. D. (2022). Technology-Based media used in teaching listening skills. *Exposure: Jurnal Pendidikan Bahasa Inggris*, 11(1), 85–99.

Maulina, M., Dayana, U., Nasrullah, R., Geelan, D., & Cortez, A. O. (2024). Educational research methodology trends of southeast Asia English major undergraduate theses : a content analysis. *Al-Ishlah Jurnal Pendidikan*, 16(3), 3179–3192. https://doi.org/10.35445/alishlah.v16i3.4698

Maulina, M., Nasrullah, R., & Wanci, R. (2022). Social media utilization for self-regulated English learning during COVID-19 outbreaks. *Tell : Teaching of English Language and Literature Journal*, 10(1), 75–83.

Marikyan, D., & Papagiannidis, S. (2024). Technology acceptance model. *Handbook of Research on Electronic Surveys and Measurements*, 306–308. https://doi.org/10.4018/978-1-59140-792-8.ch038

Moisieieva, N., Dzykovych, O., & Shtanko, A. (2023). Machine translation: comparison of works and analysis of errors Made by Deepl and Google Translate. *Advanced Linguistics*, 11, 78–82. https://doi.org/10.20535/2617-5339.2023.11.277593

Munawwarah, M. (2024). Students' perception of using DeepL as machine. *ELLTER-J*, 5(2), 284–295. https://doi.org/10.22236/ellter.v5i2.15813.g4779

Munday, J. (2016). *Introducing translation studies* (Fourth). Routledge.

Munday, J., Pinto, S. R., & Blakesley, J. (2022). *Introducing translation studies* (Fifth). Routledge. https://doi.org/10.4324/9780429352461

Munibi, A. Z. (2023). Pengaruh penguasaan kosakata dan tata bahasa terhadap kemampuan membaca bahasa Inggris. *Edukatif : Jurnal Ilmu Pendidikan*, 5(1), 691–698. https://doi.org/10.31004/edukatif.v5i1.4732

Naveen, P., & Trojovský, P. (2024). Overview and challenges of machine translation for contextually appropriate translations. *IScience*, 27(10), 1–25. https://doi.org/10.1016/j.isci.2024.110878

Polakova, P., & Klimova, B. (2023). Using DeepL translator in learning English as an applied foreign language – an empirical pilot study. *Heliyon*, 9(8), e18595. https://doi.org/10.1016/j.heliyon.2023.e18595

Rahim, T. R., & Maulina, M. (2023). Examining EFL anxiety : a case at Indonesian Islamic colleges. *Himalayan Journal of Education and Literature*, 4(1), 32–44. https://doi.org/10.47310/Hjel.2023.v04i01.003

Rintaningrum, R. (2023). Technology integration in English language teaching and learning : benefits and challenges. *Cogent Education*, 10(1). https://doi.org/10.1080/2331186X.2022.2164690

Robbins, S. P., & Judge, T. A. (2013). *Organizational Behavior* (Fifteenth). Pearson Education.

Rohmawaty, E. N., Hilmi, D., Uqba, M. S. S., & Saleh, U. S. (2024). Peran artificial intelligence (AI) dalam pembelajaran bahasa Arab. *Khatulistiwa: Jurnal Pendidikan Dan Sosial Humaniora*, 4(3), 316–328.

Rutledge, P. B., & Hogg, J. L. C. (2020). In-depth interviews. *The International Encyclopedia of Media Psychology*, 1–7. https://doi.org/10.1002/9781119011071.iemp0019

S, S., Bhattacharyya, P., Jha, S. K., & Malathi, D. (2016). A Survey report on evolution of machine translation. *IJCTA*, 9(33), 233–240.

Salsabila, K. A., Erni, & Azhar, F. (2024). The students' perception on the use of " DeepL translation tool " for reading comprehansion. *JOM FKIP - UR*, 11, 1–11.

Saputra, U. R., Maulina, Nasrullah, R., & Sakkir, G. (2021). Students' sentence errors on WhatsApp daily status: a literature review. *Celebes Journal of Language Studies*, 1(1).

Sidiq, F. A., & Syafryadin. (2024). Students' perception of using DeepL for translating English text. *Eltin Journal: Journal of English Language Teaching in Indonesia*, 12(1), 139–148.