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Indonesian EFL Students' Perceptions of DeepL Machine Translation Tool: Utilization, Advantages, and Disadvantages

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Abstract

The integration of artificial intelligence (AI) technologies, such as machine translation tools, has gained traction in language education, offering potential benefits while raising concerns. This mixed-methods study investigates the perceptions and experiences of Indonesian students learning English as a Foreign Language (EFL) regarding the use of DeepL Machine Translation. With advancements in AI and increasing reliance on translation tools, understanding users' perspectives is crucial for effective integration. The research aims to explore EFL students' perceptions of DeepL's utilization, advantages, and disadvantages through a convergent mixed-methods design. Data were collected from 293 participants across various educational levels through a closed-ended questionnaire and open-ended responses. Quantitative analysis revealed a high level of agreement towards DeepL's utilization, particularly for translating written works. Perceived advantages included translation accuracy, time-saving capabilities, and potential for language skill improvement. However, concerns regarding over-reliance and dependency were also expressed. Qualitative insights corroborated the quantitative findings, highlighting DeepL's strengths in context matching, word choice suggestions, and user-friendly features. These findings contribute to the discourse on AI integration in language education, emphasizing the importance of understanding user perceptions and developing balanced implementation strategies. The study concludes with recommendations for educators and curriculum designers to leverage machine translation tools effectively while mitigating potential drawbacks, fostering independent language learning and responsible technology use.

Keywords: DeepL machice; EFL students; Machine translation; Perception

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INTRODUCTION

English maintains its dominance as the global lingua franca and has become an established universal language, playing a pivotal role as a shared means of communication across diverse sectors, notably within the realm of education or academia. Studies have explored the use of English in various contexts, such as a standard language, a lingua franca, or a crucial element of translingual practices (Kuteeva, 2020). The English language serves as a dominant medium for global communication, transcending national boundaries and extending its influence into various linguistic communities (Murmu, 2022). Within the context of Indonesia, learners of English as a Foreign Language (EFL) encounter communication with individuals for whom English functions as a Lingua Franca (ELF) (Saputra, 2022). These interactions involve Non-Native English Speakers

(NNESs) employing English as the shared language for communication. However, incorporating ELF awareness into teacher education programs for English language teachers in school districts is considered a low priority (Igarashi & Igarashi, 2022). When effectively applied, this awareness of language can offer the knowledge and skills necessary for inclusive dialogue, mutual respect, and equitable communication, all of which are essential for fostering sustainable development and global citizenship (Hämäläinen, 2022). The widespread recognition of English as a global means of communication has rendered it an essential element in nearly every facet of human existence. It plays a pivotal role as a vital instrument for cross-cultural engagements, business transactions, and academic endeavors (Crystal, 2003). Therefore, the ability to overcome linguistic barriers is very important in every part of life between humans and one another, where almost everyone needs the means to be able to communicate well and be understood by everyone who needs it.

In today's world, the swift progress of technology has been crucial in making it easier for people to access and learn to use technological tools (Warschauer & Matuchniak, 2010). Technology's impact on English language communication has revolutionized language education by enhancing learner engagement and motivation, as well as equipping students for global interactions (Carmelin P. Mosa, 2022). This surge in technological developments has significantly impacted various facets of society, including language learning and translation. The impact of technology on English language communication has been profound, as the widespread availability of digital devices and internet access has led to greater accessibility to English language resources. This development enables learners to engage in self-directed, customized language learning experiences. Interactive learning platforms, featuring gamified language exercises and real-time communication tools, have transformed language education, boosting learner engagement and motivation (Carmelin P. Mosa, 2022).

The evolution of artificial intelligence (AI) is a consequence of technological progress, bringing a variety of applications that penetrate various domains of human activity (Russell & Norvig, 2010). Advances in artificial intelligence (AI) technology have brought significant changes to English education. Personalization of learning is becoming more possible through the use of AI, allowing teachers to craft curricula to suit students' individual needs. This agrees that according to Malik & Solanki (2021); Sakalle et al. (2021); and Tavakoli et al. (2022), AI-based approaches have been suggested to develop and continuously update individualized curricula for learners, demonstrating significant potential to enhance writing activities within dynamic and personalized educational settings. Furthermore, research has been conducted on how AI can tailor learning experiences to humans' preferred skill levels, demonstrating the effectiveness of an interactive curriculum for personalized adaptive difficulties (Zeng et al., 2022). Additionally, AI-powered online learning apps and platforms expand the accessibility of education, while automated evaluations help improve assessment efficiency and provide instant feedback to students. According to a study by Jiang et al. (2021), AI-based online translation tools have been tested for their feasibility in improving health management education. The study found that these tools can enable students to obtain a correct understanding of health education materials when translated into their native language. Additionally, an investigation conducted by Yang (2022) investigated the views of future educators on incorporating AI chatbots into English teaching. The results highlighted the significant potential of AI-powered chatbots as educational instruments to enhance interactive communication in the target language. Furthermore, a paper by Denecke et al. (2023) evaluated the possibilities and dangers of AI-driven instruments in higher education, emphasizing the advantages of such tools in tailoring learning experiences and enhancing efficacy through the automation of routine tasks. The integration of AI

technology in English education promises to improve the quality of learning and create an environment that supports the development of students' language skills. Among existing applications, AI-based translation tools have emerged as influential contributors to the global linguistic landscape. These tools emerged as a result of technological progress and have a wide range of applications in various fields of human activity. While artificial intelligence (AI) holds the promise of transforming the landscape of education, it is crucial to assess the disposition and readiness of educators when integrating AI into academic curricula. This is particularly pertinent in specialized domains like genetic counseling, where the significance of human expertise remains paramount (Holmes, 2023).

AI-powered translation tools have become an essential tool in overcoming linguistic barriers, particularly in education, where they have proven to be highly beneficial in meeting the diverse needs of students at all levels of education (Burkhard, 2022; Hsiao & Chang, 2023). For over thirty years, scholars in the field of foreign language education have been exploring the correlations between machine translation utilities and the processes of teaching and learning foreign languages (Jolley & Maimone, 2022). The integration of AI applications, such as translation tools, has proven to be highly beneficial in meeting the diverse needs of students at all levels of education (Kim, 2021). Nevertheless, students must avoid excessive dependence on such aids and instead cultivate the skill of paraphrasing to evaluate the suitability of content generated by AI-driven utilities (Alammar & Abdel-Reheem Amin, 2023). Educators should proficiently integrate AI-based tools into their teaching methods and mentor students on their proper use to avoid potential misuse (Burkhard, 2022). The integration of AI applications, such as machine translation tools, has been highly beneficial in education, as it helps students develop their language skills and prepares them for the use of advanced translation technologies. However, it is essential to consider the quality of the translated text and students' impressions when implementing AI-based tools in the classroom (Baek & Rha, 2023; Schmidhofer & Mair, 2018).

The development of AI applications has resulted in a multitude of tools that meet a variety of linguistic needs. Translation apps, in particular, have been widely used across a wide range of user demographics (Thắng et al., 2015). The widespread adoption of AI translation tools including Deepl, among Indonesian society underscores the increasing reliance on technology to overcome language barriers. Deepl is the main competitor in this domain, with the Deepl application which has recently become one of the new competitors is quite impressive, well-known, and has been used massively by many people, so it requires in-depth comparative analysis. As AI-based translation becomes more common, it will be important to research and compare different platforms to assess efficacy and user satisfaction. This trend highlights the importance of exploring user perceptions and experiences, particularly in educational contexts.

Translation, as defined by Munday (2016), encompasses both the translated text and the process by which a translator converts an original written text into another language. This process is not merely about achieving equivalence in meaning but is evaluated based on how well it meets the functional goals of the target text (TT) situation (Munday et al., 2022). Furthermore, Simanjuntak et al. (2021) describe a translation shift as a technique that involves altering the grammatical structure of the source language (ST) to fit the target language. The phenomenon of translation significantly impacts everyday life, affecting communication across different cultures and languages (Hatim & Munday, 2019). It involves taking the source text and transforming it into a target text, ensuring that the meaning and intent are preserved while adapting to the linguistic and cultural nuances of the target language (Hatim & Munday, 2019). Translation highlights the complexity and importance of translation in bridging language barriers and facilitating global understanding.

In 2022, a notable competitor in the translation engine domain emerged, known as Deepl, positioning itself as a robust alternative to Google Translate, particularly for translating between Indonesian and various languages, surpassing GT in perceived superiority. This is also in line with the evaluation results of several research journals Aguilar (2023); Farrell (2023); Moisieieva et al. (2023), DeepL Translator is considered the absolute winner in the translation challenge, showing the best performance by making fewer errors in general, one of which is compared to Google Translate. Ranked after Deepl was Microsoft's Bing, Google Translate performed the worst in linguistic problem management. Meanwhile, there was also ChatGPT, indirectly showing that despite significant advances in translation technology, there is still a marked variation in the quality of translations produced by each tool. The translation process, as emphasized by Mohammed (2023), has faced numerous challenges, emphasizing the necessity of human intervention to refine and correct translations generated by GT. This highlights the realization that relying solely on Google Translate for flawless translations is not advisable. Consequently, this research aims to collect user perspectives on their preferred translation applications, seeking to identify the most effective tools and strategies to address errors when translating short amounts of text, sentences, or paragraphs.

The primary objectives of this research are twofold: first, to examine the overall utilization patterns of DeepL Machine Translation among Indonesian EFL students, and second, to explore the perceived advantages and disadvantages of using DeepL Machine Translation as an English translation tool from the perspective of these students. To achieve these objectives, the study aims to address three specific research questions. Firstly, it seeks to understand "How do Indonesian EFL students perceive the utilization of DeepL Machine Translation as their English translation tool?" Secondly, it investigates "What are the perceived advantages of using DeepL Machine Translation as an English translation tool among Indonesian EFL students?" Thirdly, it explores "What are the perceived disadvantages of using DeepL Machine Translation as an English translation tool from the perspective of these students?"

This study makes a substantial contribution to comprehending the preferences and perceptions of students studying English as a Foreign Language (EFL) about DeepL Machine Translation (Sujarwo, 2020). By delving into students' perspectives, the research provides valuable insights that can inform the advancement of language translation technology and its effective integration into foreign language learning environments (Sidiq & Syafryadin, 2024). The results of this comparative analysis can also be employed to improve the quality of translation tools, catering to the specific requirements of EFL users. The research findings can also lay the groundwork for effective curriculum design, facilitating the judicious integration of translation technology into foreign language learning (Sidiq & Syafryadin, 2024). Therefore, this investigation holds significance in supporting the evolution and application of translation technology within foreign language education (Polakova & Klimova, 2023).

The novelty of this study lies in the comprehensive exploration of Indonesian EFL students' perceptions by exploring three important aspects of utilization, advantages, and disadvantages of using DeepL Machine Translation. To the best of my knowledge, this is the first study to explore the three aspects of utilization, advantages, and disadvantages of DeepL machine translation tools. This can guide the development of specific approaches to effectively utilize machine translation tools in language education. Moreover, there is a notable dearth of academic literature on DeepL. This is partly because DeepL is a relatively new application that has not yet garnered significant attention from users or researchers.

RESEARCH METHOD

Research Design

This study adopts a convergent mixed methods design, utilizing a one-phase approach for data collection, and analysis, and subsequently compared to determine their alignment or divergence (Creswell & Creswell, 2018). The parallel convergent design involves the simultaneous collection of both quantitative and qualitative data at a single point in the research process, followed by an independent analysis of each set, and the integration of their respective findings (Creswell & Clark, 2017). This approach assumes that qualitative data offer open-ended insights, while quantitative data provide closed-ended information (Creswell & Creswell, 2018). Recognizing the strengths and limitations of each data collection method, the study seeks to harness the complementary aspects to comprehensively understand the research problem or question. In line with Miles et al. (2013), qualitative data analysis activities were conducted interactively and continuously until data saturation was achieved. By blending quantitative and qualitative data, the research aims to overcome the limitations associated with relying solely on one method, ultimately providing a more nuanced understanding of the problem or question. This amalgamation of data, referred to as "blending" or data integration, forms the foundation of the "mixed methods research" methodology. Qualitative analysis activities, as argued by (Miles et al., 2013; Sugiyono, 2013), were undertaken interactively and continuously until completion to attain saturated data. Cohen et al. (2007) suggested that quantitative research can be utilized when employing a structured questionnaire, while qualitative research is preferable for interpreting data gathered from open-ended questionnaires, including those administered online. In alignment with Creswell et al. (2007), qualitative methodologies facilitate a comprehensive understanding of research subjects' experiences through detailed descriptions. Both quantitative and qualitative approaches are well-suited for investigating the perceptions of Indonesian EFL students regarding the utilization of Deep Learning Machine Translation as their English translation tools. Specifically, the quantitative component, through a closed-ended questionnaire, enabled the measurement and analysis of students' perceptions using structured, numerical data. This allowed for the identification of general trends and patterns in the usage, perceived advantages, and disadvantages of DeepL among the student population. Concurrently, the qualitative component, through open-ended questions, facilitated the exploration of in-depth insights, personal experiences, and contextual factors that may have influenced students' perceptions. The open-ended responses provided rich, descriptive data that complemented and elaborated on the quantitative findings.

The selection of a convergent mixed methods design was driven by the research objectives, which aimed to comprehensively understand the perceptions of Indonesian EFL students regarding the utilization, advantages, and disadvantages of using DeepL Machine Translation as their English translation tool. By employing both quantitative and qualitative methods, this study could capture a more holistic and nuanced understanding of the research problem. Furthermore, the mixed methods design aligned with the study's aim to contribute to the limited existing literature on DeepL Machine Translation in language education contexts. By combining quantitative and qualitative data, the findings could provide a more robust and holistic understanding of students' perceptions, paving the way for future research and practical implications in the effective integration of machine translation tools in language learning environments.

Research Participants

In accordance with Suharsimi (2006), the participant in this research is considered the comprehensive subject of the study. Due to practical limitations, investigations are typically conducted on a finite population involving only a subset of subjects. The present

study specifically focuses on students enrolled in Indonesian EFL learners from several different levels of education; Junior High School, Senior High School, Bachelor, Master, and Doctor across the country stratified across different semesters and classes, who had employed Deepl for translating their expressions. This aligns with Sugiyono (2013) (p. 92) assertion that the sample should be representative in terms of both size and characteristics. The participant count, determined as suitable by Bernard (2013) as cited in Bekele & Ago (2022), states that a sufficient number of participants are needed, of which 293 are adequate "to uncover and understand the major issues in any study of lived experience" (p. 48). Consequently, the researchers were constrained to select participants from this student population. The participants comprised 293 Indonesian EFL learners from various educational levels, including Junior High School, Senior High School, Bachelor, Master, and Doctorate programs. The sample represents a diverse range of students stratified across different semesters and classes. Gender distribution among participants was 30.7% male and 69.3% female, while educational levels varied with the majority being Senior High School (44.7%) and Bachelor (51.5%) students.

The rationale behind selecting different levels of education students as the study's sample stems from the anticipation that they possess a more adaptable and lucid understanding, extensive usage experience, and a lengthier history with Deepl than others. This selection criteria aligns seamlessly with the study's title, which delves into EFL Students' Perception of Deepl Machine Translation Used as Their English Translation Tool.

Table 1. The demography of respondents

Details		Frequency	%	Total
Gender	Male	90	30,7	293
	Female	203	69,3	
Degree	Junior High School	1	0,3	293
	Senior High School	131	44,7	
	Bachelor	151	51,5	
	Master	9	3,1	
	Doctor	1	0,3	

Instruments

Data collection instruments included a survey questionnaire adapted from previous studies and meticulously crafted from a prior study Mohammed (2023); and Shahriar (2023) to encompass both closed-ended (quantitative) and open-ended (qualitative) inquiries. The questionnaire, disseminated through social media platforms via a Google Form link, consisted of 21 closed-ended questions and 2 open-ended questions. The quantitative survey instrument obtained from close-ended responses adhered to the Likert scale, with participants responding via five options for each question. According to Indrawati et al. (2019), distributing questionnaires through questions or statements is used to obtain a rating scale from respondents, commonly known as the Likert scale. The Likert scale facilitated the interpretation of participants' agreement levels, the scale ranged from 1.00 to 5.00, with 1 representing "Strongly Disagree," 2 signifying "Disagree," 3 indicating "Neutral," 4 meaning "Agree," and 5 denoting "Strongly Agree." The Close-ended questionnaire comprised two main sections: demographic information of the participants and constructs. The constructs section encompassed three dimensions - the utilization or usage of Deepl, the advantages of Deepl, and the disadvantages of Deepl. The use dimension comprised eight statements, the advantage dimension included nine statements, and the disadvantage dimension consisted of four statements. The Open-ended questionnaire was conducted to verify questionnaire responses, capture participants' overall perceptions of Deepl, and explore aspects not extensively covered by the

questionnaire, allowing respondents to contribute additional ideas related to the use, advantages, and disadvantages of Deepl. Subsequently categorized into distinct themes relevant to the research inquiries. These pivotal themes were then tabulated, and chosen based on their frequency in participants' responses. The researcher then meticulously examined and contrasted the qualitative and quantitative data to determine if they supported or conflicted with each other, thus validating the research hypothesis. During the analysis of the open-ended responses, participants were labeled as P1, P2, ... P292, P293.

Data Collection

Data collection involved administering the Close-ended and Open-ended questionnaires online to verify responses and explore additional aspects related to Deepl usage. The questionnaire was administered online through a Google Form, serving as a pivotal tool for gathering information in the field. The data collection process was conducted from November 20, 2023, to April 20, 2024, among Indonesian EFL learners from various educational levels. Participants were tasked with furnishing a comprehensive insight into the experiences or usage, perceptions, advantages, and disadvantages of EFL students regarding the application of Deepl in translating the English language. The researcher gathered data through 21 quantitative closed-ended questions and 2 qualitative open-ended questions to elicit data. The questionnaire, a written set of inquiries presented to respondents, holds paramount importance in this study's data collection process. After the collection of questionnaire responses, quantification, tabulation, and statistical analysis were performed to derive conclusive insights. The survey employed a 5-point Likert scale designed by Rensis, which included five response options: Strongly agree, agree, neutral, disagree, and strongly disagree. The Likert scale was employed to gauge opinions and perceptions regarding Deepl. Variables subject to measurement were transformed into indicators using the Likert scale, forming the basis for instrument itemization, including statements or questions. Open-ended questionnaires of students who had utilized Deepl for translation were conducted. During the Open-ended questionnaire, the researcher scrutinized responses, persisting in questioning until obtaining credible data.

Data Analysis

Quantitative data in this study were acquired through the administration of Likert scale-based questionnaires. Analysis of the quantitative data involved utilizing descriptive statistics, specifically means, using Microsoft Excel, as recommended by Sugiyono (2013). The Likert scale was employed to gauge attitudes, opinions, and perceptions regarding a predetermined social phenomenon identified as the research variable. This involved translating variables into indicator variables, which were then used to formulate instrument items, such as statements or questions. According to Budiaji (2013), the Likert scale was first developed by Likert in 1932, utilizing five response points: strongly agree, agree, neutral, disagree, and strongly disagree. The five-point response system provides higher variability, making it more preferred for regression analysis due to its extensive range. Participants' consensus was assessed using mean averages and a predefined scale: 1.00-1.80 indicating "Strong Disagreement," 1.81-2.60 suggesting "Disagreement," 2.61-3.40 representing "Neutrality," 3.41-4.20 indicating "Agreement," and 4.21-5.00 corresponding to "Strong Agreement". The data analysis encompassed two main sections: demographic information of participants and their responses to three dimensions—use of Deepl, advantages of Deepl, and disadvantages of Deepl.

Complementing the quantitative approach, a qualitative tool was employed with open-ended questionnaire responses. This involved participants who also completed the

questionnaires. The interviews were recorded, and transcribed, and participants were anonymized as P1 to P293. Following the data collection, an examination was carried out by categorizing the diverse motifs arising from the respondents' feedback via thematic analysis (Clarke & Braun, 2017). The collected data underwent five steps of analysis: (1) the researchers did a summary of the data. (2) data condensation, involving the simplification and concentration of information from interview transcripts, (3) data display, presenting a structured and condensed collection of information enabling conclusion drawing and action, (4) conclusion drawing/verification, 5) After the data have been tabulated and recapitulated, the researchers proceeded with an analysis to derive the findings of the study. Following this, they engaged in the interpretation and discussion of the data outcomes uncovered in this research. Drawing on Miles (2013), the conclusion-drawing process involves analyzing what the collected data signify through noting explanations and assertions. Consequently, the insights derived from the data are anticipated to be more significant and comprehensive (Bhattarai et al., 2020; Gurkan et al., 2021)**.**

Following a convergent design approach Creswell & Creswell (2018), data analysis unfolded in three phases. The first phase involved analyzing the quantitative database for statistical results. The second phase consisted of a qualitative database involving a descriptive qualitative research method employed to analyze these themes of open-ended responses, followed by organization into broader themes. The third and final phase involved mixed methods data analysis, integrating results from both qualitative and quantitative findings. This integration required merging numeric and text-based databases, achieved through a side-by-side comparison. The discussion sections of mixed methods studies presented quantitative statistical results followed by qualitative findings, with themes either confirming or disconfirming the statistical outcomes. The integration of qualitative and quantitative findings occurred through a mixed methods approach, involving a side-by-side comparison of results to provide a comprehensive understanding of Indonesian EFL students' perceptions of Deepl.

RESULTS AND DISCUSSION

Validity and Reliability of The Tools

Before data computation, the researchers needed to conduct a reliability assessment of the closed-ended questionnaire utilizing Cronbach's Alpha Analysis via statistical software (SPSS). The open-ended and closed-ended questionnaires underwent evaluation by two professors to ascertain the validity and relevance of the items. Following the professors' evaluation, certain statements were adjusted accordingly. The questionnaire was formatted using Google Forms and distributed to the intended participants via WhatsApp. Alongside the questionnaire link, a message requesting participation was included. Table 2 presents the reliability scores obtained from the analysis.

Table 2. Reliability Statistic

Reliability Statistics

Cronbach's Alpha	N of Items
.924	21

The data presented in Table 2 reveals a Cronbach's Alpha Score of 0.924, derived from responses to 21 items by 293 students. This score suggests a commendable level of reliability for the close-ended questionnaire utilized in the study (Vaske et al., 2017). After ensuring the reliability of the questionnaire, the link was sent to the participants. It was sent to 350 students, but only 283 who were interested in the research topic participated.

The Levels of Means and Scale of Questionnaire Responses.

The gathered data underwent analysis utilizing Microsoft Excel to derive descriptive statistics. The analytical process comprises two main sections. The initial part delved into the demographic profile of the participants and their responses to a close-ended questionnaire focusing on three dimensions. The subsequent section delved into the participants' responses to an open-ended questionnaire. Quoting and adapting according to Mohammed (2023) the scale used for correction and analysis is shown in Table 3.

Table 3. The Levels of Means and Scale of Questionnaire Responses

Scale	Length of means	Agreement direction
1	1.00 to 1.80	Strongly Disagree
2	1.81 to 2.60	Disagree
3	2.61 to 3.40	Neutral
4	3.41 to 4.20	Agree
5	4.21 to 5.00	Strongly Agree

Result

Close-Ended Questionnaire

The Utilization of Deepl

The participants in this study responded to the questionnaire items on EFL Students' Perceptions of Using Deepl Machine Translation. The mean scores and percentages for each item were analyzed regarding the usage of Deepl as shown in Table 4.

Table 4. The Utilization of Deepl

No	Item	SD	D	N	A	SA	Mean	Category
1	I use DeepL to check the meaning of unknown words only.	7,5	11,6	22,9	33,1	24,9	3,56	Agree
2	I use DeepL to translate a paragraph.	6,1	5,8	19,5	40,6	28,0	3,78	Agree
3	I use DeepL to translate an essay or paper from English into Indonesian to enable me to understand the meaning.	6,8	9,6	20,1	31,4	32,1	3,72	Agree
4	It is easier for me to read texts in Indonesian, so I resort to using DeepL to translate texts from English into Indonesian.	6,1	7,5	24,9	32,8	28,7	3,70	Agree
5	My English is weak in writing, so I need to use DeepL.	6,5	9,6	27,6	32,8	23,5	3,57	Agree
6	My English is weak in reading, so I need to use DeepL.	7,5	14,7	27,6	32,8	17,4	3,38	Neutral
7	I use DeepL to translate an essay, article or paper from Indonesian into English to submit it to the teacher.	8,5	9,9	29,0	34,8	17,7	3,43	Agree
8	I write assignments/ papers in Indonesian and then translate them into English using DeepL.	6,5	12,6	27,3	36,2	17,4	3,45	Agree
	Total	7,0	10,2	24,9	34,3	23,7	3,58	**Agree**

Based on Table 4, it can be observed that the overall average responses indicate a high level of agreement towards the use of Deepl, demonstrating a wide, positive, and frequent usage. Out of the seven statements, all fall under the 'agree' category except one, which falls under the 'neutral' category. The table encompasses questionnaire results and

the average scores based on respondent feedback. Statements discussed in Table 4 are arranged from the highest to the lowest mean scores. The statement with the highest mean score is 'I use Deepl to translate a paragraph.' with an average score of 3.78, followed by 'I use Deepl to translate an essay or paper from English to Indonesian to understand its meaning.' with an average score of 3.72, and then 'It is easier for me to read texts in Indonesian, so I use Deepl to translate texts from English to Indonesian.' with an average score of 3.70. These three statements fall under the 'agree' category, while the statement with the lowest mean score is 'My English reading is weak, so I need to use Deepl' with an average score of 3.38, falling under the 'Neutral' category. These findings suggest that Deepl is trusted and widely used by users, especially in translating paragraphs and written works from English to Indonesian. However, there is also the idea that respondents are not accustomed to using Deepl to help understand difficult English readings. Surprisingly, the overall response to this dimension is 'agree', with the average of all statements reaching 3.58, highlighting a significant level of DeepL usage. Many students regard DeepL as an essential translation tool, with its widespread installation on various devices and the entire website demonstrating its user-friendliness, accessibility, and inclusion (Plenter, 2023; Sidiq & Syafryadin, 2024). Next, we will move on to another dimension, namely the advantages of Deepl from the user's perspective.

The Advantage of Deepl

The advantages of using Deepl are numerous and make it an essential tool for anyone who needs to communicate in multiple languages quickly and accurately, English in particular. The main features of Deepl's advantages are considered using percentages and averages for each item and averages for the total construct.

Table 5. The Advantage of DeepL

No	Item	SD	D	N	A	SA	Mean	Category
1	DeepL needs less proofreading and editing by English language experts.	4,1	7,2	47,1	27,6	14,0	3,40	Neutral
2	DeepL saves my time.	2,7	5,1	23,5	37,2	31,4	3,89	Agree
3	The advantages of DeepL are far more than the disadvantages.	2,4	3,8	32,8	36,2	24,9	3,77	Agree
4	DeepL is suitable for translating English into Indonesian.	2,4	5,1	20,8	42,7	29,0	3,91	Agree
5	I use DeepL to improve my English language by translating different types of texts.	4,4	7,5	26,6	36,5	24,9	3,70	Agree
6	DeepL is suitable for translating Indonesian into English.	2,0	5,5	20,5	44,0	28,0	3,90	Agree
7	DeepL is suitable for translating documents related to my field.	3,8	6,8	38,2	34,5	16,7	3,54	Agree
8	DeepL translation is acceptable in terms of the assignment/paper that I deliver to my teacher/guide.	3,4	6,8	38,6	36,2	15,0	3,53	Agree
9	I am satisfied with the outcome of the DeepL.	3,1	4,4	29,0	38,2	25,3	3,78	Agree
	Total	3,1	5,8	30,8	37,0	23,2	3,71	**Agree**

The results shown in Table 5 indicate that the participants felt that Deepl has many advantages, this is evidenced by the large number of mean results that answered 'agree' in as many as 8 out of 9 statements, this means that only 1 statement answered other than 'Agree', namely answering 'Neutral' which means that there are also those who have other opinions. The statements stating that 'DeepL is suitable for translating English into Indonesian', 'DeepL is suitable for translating Indonesian into English', and 'DeepL saves my time' were ranked the highest with mean scores of: 3.91, 3.90, and 3.89 and were

categorized as 'Agree'. Moreover, these participants thought that the advantages of Deepl far outweighed the disadvantages. On the other hand, the statement "DeepL needs less proofreading and editing by English language experts" received the lowest score of 3.40, indicating a neutral response from participants. Additionally, DeepL facilitates a combination of human and machine translation, which can enhance translation quality by up to 28% (Li et al., 2023). The total average of items calculated for this dimension is 3.71, which is in the 'Agree' category. Participants believed that they agreed that Deepl has many advantages. This is consistent with the findings of Sidiq & Syafryadin (2024), which state that DeepL is an essential and highly needed tool for translation, providing easy and straightforward translations. In addition, DeepL produces high-quality translations, with over 90% of sentences being reproduced word for word or with synonyms in a stable left-right order in both the original language and English (Plenter, 2023). However, Deepl also has some disadvantages, it is very important to know the disadvantages of Deepl from EFL Student's Perception. The next section illustrates some of the main disadvantages of Deepl.

The Disadvantage of Deepl

Besides the advantages, Deepl also has some disadvantages, the disadvantages of using Deepl will be discussed in the following dimensions.

Table 6. The Disadvantage of DeepL

No	Item	SD	D	N	A	SA	Mean	Category
1	DeepL makes me lazy.	27,6	31,7	25,3	10,9	4,4	2,33	Disagree
2	DeepL makes me dependent on it.	14,7	25,9	37,9	15,0	6,5	2,73	Neutral
3	DeepL provides a bad language structure.	28,0	39,6	24,6	5,8	2,0	2,14	Disagree
4	I am dependent on DeepL for everything related to my study.	14,3	24,2	40,3	16,0	5,1	2,73	Neutral
	Total	21,2	30,4	32,0	11,9	4,5	2,48	**Disagree**

Table 6 depicts the responses obtained from the participants regarding Deepl's shortcomings. In the statements 'DeepL makes me dependent on it' and 'I am dependent on DeepL for everything related to my study' the mean value for both is the same as 2.73 and is in the 'Neutral' category. The next statements 'DeepL makes me lazy' and 'DeepL provides a bad language structure' get mean results of 2.33 and 2.14 and are in the Disagree category. So, in the shortcomings section, participants had balanced opinions, 2 items were in the 'Neutral' category and the other 2 answered 'Disagree'. These results show that the participants think that Deepl is more profitable because the mean total advantage of Deepl is 3.71 in the 'Agree' category while the mean disadvantage is 2.48 in the 'Disagree' category. Furthermore, we will analyze each item separately. The statements 'DeepL makes me dependent on it' and 'I am dependent on DeepL for everything related to my study' are some of DeepL's most visible weaknesses. Statements related to this idea received the highest score, and are in the 'Neutral' category. Apart from this, strong evidence from the data shows that regarding 'DeepL makes me lazy', many participants do not agree with this statement, so they believe that DeepL does not make them lazy. Furthermore, almost all participants think that DeepL provides a good language structure because the data shows disagreement with the statement 'DeepL provides a bad language structure'. Additionally, while some students were not dependent on DeepL, others believed that its ease of use could lead to dependency. This is because DeepL provides quick and simple searches for difficult or unfamiliar terms, making it more convenient than using a traditional dictionary. Despite this, most students did not feel that using DeepL made them lazy about learning (Sidiq & Syafryadin, 2024). It was found that items related to this idea had the lowest mean value. Based on the above, it can be concluded

that the total average of items calculated for this dimension is 2.48, which is in the 'Disagree' category.

Recapitulation of Close-Ended Questionnaire

To address the inquiries of this study, the findings from the closed-ended questionnaire, presented initially, are summarized in Table 7 below. Subsequently, a recapitulation was incorporated.

Table 7. The Close-Ended Questionnaire

No	Item	SD	D	N	A	SA	Mean	Category
1	I use DeepL to check the meaning of unknown words only.	7,5	11,6	22,9	33,1	24,9	3,56	Agree
2	I use DeepL to translate a paragraph.	6,1	5,8	19,5	40,6	28,0	3,78	Agree
3	I use DeepL to translate an essay or paper from English into Indonesian to enable me to understand the meaning.	6,8	9,6	20,1	31,4	32,1	3,72	Agree
4	It is easier for me to read texts in Indonesian, so I resort to using DeepL to translate texts from English into Indonesian.	6,1	7,5	24,9	32,8	28,7	3,70	Agree
5	My English is weak in writing, so I need to use DeepL.	6,5	9,6	27,6	32,8	23,5	3,57	Agree
6	My English is weak in reading, so I need to use DeepL.	7,5	14,7	27,6	32,8	17,4	3,38	Neutral
7	I use DeepL to translate an essay, article or paper from Indonesian into English to submit it to the teacher.	8,5	9,9	29,0	34,8	17,7	3,43	Agree
8	I write assignments/ papers in Indonesian and then translate them into English using DeepL.	6,5	12,6	27,3	36,2	17,4	3,45	Agree
9	DeepL needs less proofreading and editing by English language experts.	4,1	7,2	47,1	27,6	14,0	3,40	Neutral
10	DeepL saves my time.	2,7	5,1	23,5	37,2	31,4	3,89	Agree
11	The advantages of DeepL are far more than the disadvantages.	2,4	3,8	32,8	36,2	24,9	3,77	Agree
12	DeepL is suitable for translating English into Indonesian.	2,4	5,1	20,8	42,7	29,0	3,91	Agree
13	I use DeepL to improve my English language by translating different types of texts.	4,4	7,5	26,6	36,5	24,9	3,70	Agree
14	DeepL is suitable for translating Indonesian into English.	2,0	5,5	20,5	44,0	28,0	3,90	Agree
15	DeepL is suitable for translating documents related to my field.	3,8	6,8	38,2	34,5	16,7	3,54	Agree
16	DeepL translation is acceptable in terms of the assignment/paper that I deliver to my teacher/guide.	3,4	6,8	38,6	36,2	15,0	3,53	Agree
17	I am satisfied with the outcome of the DeepL.	3,1	4,4	29,0	38,2	25,3	3,78	Agree
18	DeepL makes me lazy.	27,6	31,7	25,3	10,9	4,4	2,33	Disagree
19	DeepL makes me dependent on it.	14,7	25,9	37,9	15,0	6,5	2,73	Neutral
20	DeepL provides a bad language structure.	28,0	39,6	24,6	5,8	2,0	2,14	Disagree
21	I am dependent on DeepL for everything related to my study.	14,3	24,2	40,3	16,0	5,1	2,73	Neutral
	Total	8,0 **20,1**	12,1	**28,8**	31,2 **51,1**	19,9	**3,43**	**Agree**

Among 293 EFL participants in Indonesia, 21 items were distributed to gauge their Perception of Deepl Machine Translation as an English Translation Tool. The collective mean score ($\bar{X}$) derived from their feedback spans from 2.14 to 3.91, yielding an overall average of 3.43. Predominantly, students favored the Strongly Agree (SA) option, constituting 19.9%, and the Agree (A) option, totaling 31.2%, culminating in a combined average score of 51.1. Neutral (N) garnered a mean score of 28.8, while Disagree (D) and Strongly Disagree (SD) were chosen by 12.1% and 8.0% of respondents, respectively, culminating in a total mean score of 20.1. These results underscore a prevailing inclination among students towards affirming the statements proffered in the closed questionnaire. Additionally, students' inclination towards the Neutral (N) option, followed by Disagree (D) and Strongly Disagree (SD), underscores noteworthy trends. Furthermore, the potential of utilizing questionnaires to delve into participants' perceptions regarding the utility, merits, and demerits of Deepl warrants further refinement and optimization, particularly in light of the participants' demographic backgrounds and their potential influence on these three dimensions.

Results from the Open-Ended Questionnaire

Following the completion of the closed-ended questionnaire, an open-ended questionnaire was administered to further supplement the responses of EFL learners. This approach aimed to delve deeper into the perceptions of EFL students regarding the utilization of Deepl machine translation as their English translation tool from various perspectives. Provided below are examples of questions from the open-ended questionnaire, as illustrated in Table 8:

Table 8. The Samples of the Open-Ended Questionnaire

Question	Sub-Theme	Sample of 293 Student's Response
22. Please describe the differences between the machine translation tool you normally use and the DeepL Translator!	1. Translation accuracy and quality.	"DeepL is more accurate than other translators, for example google, sometimes there are some words that are misinterpreted by google but can be interpreted clearly when using deepl" (Respondent 36)
		"In my opinion, the results of language translation using the DeepL translator tool are more accurate than other translator tools" (Respondent 59).
	2. Word choice and context match.	"At DeepL there is more variety, the choice of sentences and words has been suggested so that it can be adjusted to the sentence that will be used" (Respondent 43)
		"DeepL when we translate can choose other words compared to other tralstae tools" (Respondent 49)
	3. Features and ease of use.	"The direct file translation feature makes deepl superior in my opinion, so you don't have to screenshot each page to translate" (Respondent 119)
		"DeepL is more time efficient" (Respondent 23)
	4. Language support.	"DeepL supports fewer languages than Google Translate, covering over 30 languages as of the last update. Although the range seems limited." (Respondent 53)
		"Language Support: DeepL supports fewer languages than Google Translate, with around 30 languages as of writing, while Google Translate supports over 130 languages" (Responden 106)
	5. Usage experience varies.	"The few experiments I have done, DeepL is actually not much different from google translate in terms of the results of compiling language translations" (Respondent 82)

		"I don't know the difference between the two, because I am not familiar with and have never used the DeepL translator tool, so I cannot explain the difference." (Respondent 30)
23. Please describe your experience using deepL to learn how to write a summary in English!	1. Helps in translating and understanding.	"DeepL really helps me in translating from Indonesian to English, by using the translator tool more easily, it makes writing a summary more organized and neat in terms of grammar" (Respondent 17)
		"The translation results displayed by DeepL help me to write a summary in English because DeepL translates Indonesian to English more accurately." (Respondent 166)
	2. Simplify and speed up the summary writing process.	"With deepl I can summarize the understanding of the character and the discovery of the character from abroad because English is the language used throughout the world" (Respondent 150)
		"It is easier and more accurate" (Respondent 215)
	3. Helps learn good sentence structure and grammar.	"It is good that it is more accessible to the word sense, than other translation engines" (Respondent 72)
		"DeepL helps to organize and use structures well and it helps me in writing summaries in English or vice versa" (Respondent 115)
	4. Expand English vocabulary.	"When writing summaries in English I often use DeepL because the translation is quite accurate from the meaning and grammar. With DeepL I also find it easier to learn the meaning of various English words." (Respondent 237)
	5. Provides a satisfying experience and helps with tasks.	"My experience is very good, which used to be confused about translating now it is easier and more understandable." (Respondent 182)
		"Very helpful for fulfilling school assignments" (Respondent 142)

The open-ended questionnaire responses provided valuable insights into the participants' perceptions and experiences with using DeepL as a machine translation tool. Table 8 presents samples of these responses, categorized into relevant sub-themes based on the questions asked. Regarding the differences between DeepL and other machine translation tools (Question 22), the responses highlighted DeepL's perceived superiority in translation accuracy, quality, and context matching. Participants appreciated DeepL's ability to suggest appropriate word choices and sentence structures that better aligned with the intended context. Additionally, features like direct file translation and a user-friendly interface were cited as advantages, enhancing efficiency and convenience. While DeepL's language support was generally viewed positively, some participants acknowledged its limited range compared to tools like Google Translate as a potential drawback. The responses also revealed varying experiences, with some participants finding DeepL significantly superior and others not noticing substantial differences.

When asked about their experiences using DeepL for writing summaries in English (Question 23), the responses clustered around several key themes. Many participants found DeepL helpful in accurately translating and comprehending English texts, simplifying and speeding up the summary writing process. Some believed that using DeepL exposed them to proper sentence structures and grammar conventions, contributing to their language learning. Furthermore, by providing accurate translations and suggesting appropriate word choices, DeepL was perceived as a tool that could help expand the participants' English vocabulary. Overall, the participants expressed satisfaction with using DeepL for summary writing and found it helpful in completing related assignments or tasks.

Discussion

This study delves into the perceptions and experiences of Indonesian EFL students regarding the utilization of DeepL Machine Translation as an English translation tool. By examining the dimensions of utilization, advantages, and disadvantages through a mixed-methods approach, the research provides a comprehensive understanding of the role and implications of AI-based translation technology in language learning environments. The findings offer valuable insights that contribute to the broader discourse on the integration of AI technologies in education.

Addressing the first research question, "How do Indonesian EFL students perceive the utilization of DeepL Machine Translation as their English translation tool?", the quantitative results from the close-ended questionnaire reveal widespread and frequent usage among the participants. The overall mean score for the utilization dimension was 3.58. The qualitative insights from the open-ended questionnaire corroborate and enrich these quantitative findings. Participants expressed their appreciation for DeepL's superior translation accuracy, quality, and context matching compared to other machine translation tools. They highlighted DeepL's ability to suggest appropriate word choices and sentence structures that better align with the intended context. These qualitative perspectives align with the high utilization levels observed in the quantitative data, indicating that DeepL's perceived strengths contribute to its frequent usage among language learners. This aligns with the growing trend of reliance on machine translation tools in language learning environments, as noted by recent studies. For instance, Tsai (2019) observed that machine translation tools are increasingly perceived as essential aids in both classroom and self-directed learning settings due to their accessibility and ease of use. In addition, many students regard DeepL as an essential translation tool, with its widespread installation on various devices and the entire website demonstrating its user-friendliness, accessibility, and inclusion (Plenter, 2023; Sidiq & Syafryadin, 2024).

Concerning the second research question, "What are the perceived advantages of using DeepL Machine Translation as an English translation tool among Indonesian EFL students?", the quantitative results from the close-ended questionnaire demonstrate a strong agreement with the advantages of DeepL. The overall mean score for this dimension was 3.71 or "agree" category, with statements such as "DeepL is suitable for translating English into Indonesian" receiving the highest mean score of 3.91 and followed by "DeepL saves my time" with a mean of 3.89 receiving high levels of agreement. The qualitative data further corroborates and expands on these perceived advantages. Participants appreciated DeepL's user-friendly features, such as direct file translation, which enhanced efficiency and convenience. Additionally, they acknowledged DeepL's potential to improve their English language skills by exposing them to appropriate word choices and sentence structures through the translation process. These findings resonate with recent literature emphasizing DeepL's advanced neural network-based translations, contextual appropriateness, and potential benefits in language education (Baek & Rha, 2023; Kim, 2021; Plenter, 2023; Steigerwald et al., 2022). In addition, DeepL produces high-quality translations, with over 90% of sentences being reproduced word for word or with synonyms in a stable left-right order in both the original language and English (Plenter, 2023). Additionally, DeepL facilitates a combination of human and machine translation, which can enhance translation quality by up to 28% Li et al. (2023). The combination of quantitative and qualitative data underscores the perceived superiority of DeepL over other translation tools, making it a valuable asset for language learners.

Regarding the third research question, "What are the perceived disadvantages of using DeepL Machine Translation as an English translation tool from the perspective of these students?", the quantitative results from the close-ended questionnaire suggest a relatively low level of concern. The overall mean score for the disadvantage dimension

was 2.48, indicating a general disagreement with the negative statements. However, the statements "DeepL makes me dependent on it" (mean: 2.73) and "I am dependent on DeepL for everything related to my study" (mean: 2.73) received neutral responses, suggesting mixed feelings among participants regarding potential over-reliance or dependency on DeepL. These findings align with concerns raised in the literature about the potential hindrances to independent language skill development and the need for balanced use of machine translation tools in educational settings (Alammar & Abdel-Reheem Amin, 2023; Lee, 2021). The qualitative data did not explicitly contradict or support these quantitative findings, as participants primarily focused on expressing the advantages and positive experiences of using DeepL. Nevertheless, the mixed responses in the quantitative data highlight the importance of addressing potential drawbacks and fostering responsible use of machine translation tools in language education.

In the section titled "The recapitulation of the close-ended questionnaire responses", the study summarizes and discusses the overall findings from the close-ended questionnaire. From the recapitulation of the close-ended questionnaire responses, it appears that the total average score is 3.43, which falls into the "Agree" category. The distribution of responses shows that most participants chose the "Agree" or "Strongly Agree" options, indicating an overall positive perception towards the use of DeepL. In more detail, 51.1% of participants answered "Agree" (31.2%) and "Strongly Agree" (19.9%), which is the majority percentage. Only 20.1% chose "Disagree" (12.1%) and "Strongly Disagree" (8.0%). Meanwhile, 28.8% of participants chose the "Neutral" option. These findings indicate a general tendency among EFL students to agree with the positive statements in the close-ended questionnaire. Although some students chose the "Neutral", "Disagree", and "Strongly Disagree" options, these figures are relatively low compared to the percentage expressing agreement.

The study's findings have significant implications for the integration of AI-based translation technology in language education. The positive perceptions and perceived advantages suggest that DeepL can serve as a valuable supplementary tool to enhance language learning experiences. However, the potential for over-reliance and the need for balanced use, as highlighted by some participants and the literature by Alammar & Abdel-Reheem Amin (2023) and Lee (2021), emphasize the importance of careful implementation strategies. Educators should guide the appropriate use of machine translation tools, fostering an environment where students can develop independent language skills while leveraging technological support judiciously. Clear guidelines and best practices should be established to ensure that students understand the strengths and limitations of these tools, and use them responsibly as supplementary aids rather than primary resources. Furthermore, the study's findings contribute to the broader discourse on the integration of AI technologies in education. As AI continues to advance and permeate various domains, understanding user perceptions and experiences becomes crucial for informed decision-making and effective implementation strategies. The positive reception of DeepL among Indonesian EFL students aligns with the potential benefits of AI applications in enhancing personalized learning experiences, improving assessment efficiency, and expanding educational accessibility (Denecke et al., 2023; Jiang et al., 2021; Malik & Solanki, 2021).

Based on the research, this study offers a valuable contribution to the understanding of machine translation tools' role in language learning environments. The positive perceptions and perceived advantages of DeepL among Indonesian EFL students, supported by both quantitative and qualitative data, highlight its potential as a supplementary aid in enhancing language learning experiences. However, the findings also emphasize the need for balanced use and careful integration strategies to mitigate potential drawbacks, such as over-reliance, and foster the development of independent

language skills. As AI technologies continue to advance, further research is warranted to explore effective implementation approaches and longitudinal impacts on language proficiency, ultimately supporting the evolving landscape of language education in the digital age.

CONCLUSION

This study provides an in-depth and comprehensive insight into the perceptions of EFL students in Indonesia towards the use of DeepL Machine Translation as an English translation tool. The quantitative findings revealed high approval rates for the regular use of DeepL, with an overall mean score of 3.58 for the utilization dimension. Participants expressed strong agreement with statements regarding using DeepL for translating paragraphs, essays, and written works between English and Indonesian. The advantages dimension also received a high mean score of 3.71, indicating that participants recognized various benefits, such as DeepL's suitability for translating between English and Indonesian, time-saving capabilities, and potential for improving their English language skills. However, the disadvantages dimension received a relatively lower mean score of 2.48, suggesting that participants did not significantly perceive major drawbacks. Nonetheless, some concerns regarding potential over-reliance and dependency on DeepL were evident, as statements related to this aspect received neutral responses. The qualitative data from the open-ended questionnaire further enriched and corroborated the quantitative findings. Participants highlighted DeepL's superiority in translation accuracy, quality, context matching, and appropriate word choice suggestions compared to other translation tools. They also appreciated DeepL's user-friendly features and its potential to simplify and expedite tasks like summary writing in English. However, some participants acknowledged DeepL's limited language support compared to tools like Google Translate.

The study's findings hold significant theoretical implications for the field of language education. By exploring the utilization, advantages, and disadvantages of an AI-based translation tool from the perspective of language learners, this research contributes to the ongoing discourse on the integration of artificial intelligence technologies in educational settings. The positive reception of DeepL aligns with the potential benefits of AI applications in tailoring personalized learning experiences, improving assessment efficiency, and expanding educational accessibility. Furthermore, the study's insights highlight the importance of understanding user perceptions and experiences when implementing AI technologies, informing effective strategies for responsible and balanced integration. From a practical standpoint, the findings offer valuable guidance for educators and curriculum designers seeking to leverage machine translation tools effectively in language learning environments. By identifying the perceived strengths and limitations of DeepL, this study provides a foundation for developing best practices and guidelines for its judicious use as a supplementary aid.

While this study provides valuable insights, it is essential to acknowledge the study's limitations and the need for further research. While the mixed-methods approach provided a comprehensive understanding of participants' perceptions, the sample was limited to Indonesian EFL students from various educational levels. Exploring the perspectives of a more diverse demographic, including language learners from different cultural and linguistic backgrounds, could yield additional insights. Additionally, longitudinal studies examining the long-term impact of DeepL and other machine translation tools on language proficiency and skill development would be valuable in informing best practices for their integration into language education curricula and would further enrich the understanding of this rapidly evolving field.

RECOMMENDATION

Based on the research findings, several recommendations can be considered. First, educators should integrate translation tools such as DeepL as an additional aid in language teaching, but not as the main source. Second, careful guidance and evaluation from teachers are needed to ensure that the translations produced are accurate and contextually appropriate. Third, learners should be encouraged to develop independent translation skills and not rely too much on machine translation tools. Fourth, further research needs to be conducted to explore the longitudinal impact of using DeepL on language skills, as well as strategies to mitigate potential disadvantages. Finally, a deeper understanding of the perceptions and experiences of DeepL users from different demographic backgrounds could also be beneficial to improve the effective use of the tool.

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