

Students' Perceptions of the Use of Machine Translation in Learning English for Non-English Department

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ABSTRACT

Machine translation (MT) has become an increasingly important technology in English language learning, particularly for students with limited English proficiency. However, previous studies have mainly focused on English department students or the technical performance of MT, while the perceptions of non-English department students who study English as a general course remain underexplored. This study aims to investigate non-English department students' perceptions of using MT in English language learning. A descriptive qualitative design was employed involving 25 undergraduate students selected through purposive sampling. Data were collected through an open-ended questionnaire distributed via Google Forms and analyzed using thematic analysis following Braun and Clarke's (2006) six-phase procedure, which includes familiarization with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the report. The findings indicate that students generally perceive MT positively, particularly for facilitating comprehension, improving learning efficiency, supporting academic tasks, and providing accessible language assistance. MT also functions as a learning support tool that enhances students' confidence and understanding. These findings suggest that MT has considerable potential to support English language learning among non-English department students.

Keywords: *Machine Translation, English Language Learning, Non-English Department Students, Students' Perceptions, Technology Acceptance Model (TAM)*

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INTRODUCTION

Advances in digital technology have brought significant changes to the world of education particularly in language learning, where artificial intelligence-based technologies are increasingly integrated into the student learning process (Permatasari et al., 2024). One technology that is increasingly being used is machine translation (MT), an artificial intelligence-based system capable of automatically and instantly translating text from one language to another (Fang et al., 2022). In the context of learning English as a Foreign Language (EFL), MT functions not only as a translation tool but also as a supportive resource for understanding vocabulary, sentence structure, and text meaning more quickly and efficiently (Rahmawati et al., 2025). The use of MT is becoming increasingly important, especially for students in non-English departments who often face difficulties in understanding English-language materials in their academic studies (Clarisa & Kurniawati, 2025).

Recent research indicates that students are increasingly using machine translation (MT) and other artificial intelligence (AI)-based technologies to support their English language learning, particularly in understanding English texts and completing academic assignments (Cahyani et al., 2025). Previous research found that students generally have a positive attitude toward machine translation because this technology helps improve learning efficiency, understand new vocabulary, and facilitates access to English materials (Munawwarah & Martriwati, 2024). Additionally, Rahmawati et al. (2025) noted that students tend to use machine translation because this technology is considered practical and easy to use in an

academic setting. These findings are closely related to the Technology Acceptance Model (TAM), which states that when users perceive a technology as a practical and easy to use, they are more likely to adopt it (Venkatesh et al., 2000). Therefore, machine translation has become an important technological tool that supports students' English learning process.

Non-English department students may have different experiences with machine translation because English is generally studied as a supporting subject rather than as the main focus of their academic program. Unlike English majors, who receive more intensive instruction in grammar, vocabulary, translation, and language skills, non-English majors often have more diverse levels of English proficiency and may use MT primarily to understand academic materials, complete assignments, or overcome language barriers. This distinction is supported by Tsai (2021), who found that non-English-major university students used MT to read English textbooks and reported increased English-learning motivation and reduced reading anxiety. Recent research also shows that university students commonly perceive MT as a useful auxiliary tool for vocabulary, translation, and academic tasks, although its effectiveness depends on how learners use and evaluate its output (Alqahtani & Alsuhailani, 2024; Lew, 2025). Consequently, examining non-English department students separately is important because their experiences may emphasize accessibility, comprehension, efficiency, and academic support rather than the more specialized linguistic and translation concerns typically experienced by English majors.

Furthermore, various studies have highlighted the role of machine translation as a learning aid, not merely a translation application. From a sociocultural theory perspective, machine translation can function as an intermediary tool that helps students understand language input and complete learning tasks that might initially be difficult to accomplish independently (Grageda et al., 2022; Jeong et al., 2022). Through instant language assistance, machine translation also provides scaffolding that helps students develop language skills gradually (Genis, 2025). These findings indicate that MT has become an important technological resource in supporting English language across different educational contexts.

Research on machine translation (MT) in language education continues to evolve; however, most previous studies have focused primarily on students studying English or on the effectiveness and accuracy of translation and technical performance rather than students' learning experiences and perceptions (Amaniansih, 2025). Existing research also largely concerns students who are intensively engaged in learning English and frequently encounter English-language literature in their academic activities. As a result, research on students in non-English majors remains scarce, particularly on students who take English only as a general course and have limited exposure to English-language materials in their daily learning activities (Mai et al., 2024). Furthermore, MT has largely been discussed from a technical perspective, while its function as a learning tool from the students' perspective has received relatively little academic attention (Fadlan et al., 2024). Consequently, the available evidence on how students with minimal interaction with English-language literature perceive the usefulness of MT in supporting their English language learning process remains limited. This gap underscores the need for further research into the perceptions of students in non-English degree programs regarding machine translation as a tool that facilitates English language learning, rather than merely as a translation app.

Based on the research gaps outlined above, this study seeks to answer the research question: How do non-English students perceive the use of machine translation in English language learning? Therefore, the objective of this study is to investigate non-English students' perceptions of machine translation as a supportive tool in English language learning. This study also aims to explore how students view the usefulness and ease of using machine translation to help them understand English language learning materials, even though they have limited exposure to English-language literature and intensive language learning. The novelty of this study lies in its focus on students who study English only as a general course, not as their major field of study. Compared to English majors, non-English majors tend to encounter English-language materials and literature less frequently in their daily academic activities. Therefore, this study offers a new perspective by examining how students with

limited exposure to English-language texts view the role of machine translation in supporting their English language learning process.

METHOD

This study employs a descriptive qualitative design to explore the perceptions of students in non-English major students regarding the use of machine translation (MT) in English language learning. In this study, the research focus is specifically directed at exploring how non-English major students view the use of machine translation as a tool in English language learning, particularly among students who study English as a general course and have limited exposure to English language materials in their academic activities.

The participants in this study are the first-semester undergraduate students in the Faculty of Engineering at a university in Semarang. These students took a required English course only at the beginning of the semester. Participants were selected using purposive sampling based on specific criteria. The criteria were that students had experience using translation programs such as Google Translate or DeepL to learn English or complete academic assignments. This sampling method was used to ensure that participants were accustomed to using translation programs in a learning context and were expected to provide information that was useful and relevant to the research objectives.

This study involved 25 students as participants. The number of participants was considered appropriate for qualitative inquiry because qualitative studies typically employ relatively small sample sizes to allow in-depth exploration and detailed analysis of participants' perspectives and experiences (Wutich et al., 2024). Participation was conducted on a voluntary basis, and all participants were informed about the objectives of the study before the data collection process began. The researchers also ensured that all responses and information provided by the participations would be kept confidential and utilized exclusively for academic purposes.

Data was collected via a questionnaire distributed online using Google Forms. The questionnaire consisted of open-ended questions designed to gather information regarding students' experiences, perceptions, and reasons for using machine translation while learning English. The questionnaire was developed based on the study objectives and relevant literature on students' perceptions and use of machine translation in English learning, with items covering usefulness, accessibility, learning support, comprehension, and confidence. Sample questions included: "How does machine translation help you understand English learning materials?" and "How does using machine translation affect your confidence when completing English learning tasks?" The development of this instrument was based on the Technology Acceptance Model (TAM) (Davis, 2014), specifically the concepts of perceived usefulness and perceived ease of use, as well as a sociocultural perspective on learning aids. The questionnaire's questions were modified and translated based on earlier studies in the domain of MT and technology enhanced language instruction to guarantee their applicability to the study's environment. In order to have a deeper understanding of the participants' opinions about machine translation in English language learning, recurrent patterns and themes in their comments were found, categorized, and grouped using thematic analysis.

FINDINGS AND DISCUSSION

Findings

The thematic analysis of participants' responses revealed two major themes based on the TAM, namely Perceived Usefulness and Perceived Ease of Use. In addition, one additional theme emerged from the data, highlighting the role of machine translation as a learning support tool. Each theme consists of several subthemes that represent students' perceptions and experiences regarding the use of MT in English language learning. The findings are presented below together with representative excerpts from the participants' responses.

Facilitating Comprehension of English Materials

The result showed that students' comprehension of English learning materials is greatly aided by MT. The majority of participants stated that MT helps them understand academic words, difficult sentences, uncommon vocabulary, and English-language journals. A few of students clarified that MT helps them gain a broad comprehension of texts before delving deeper into the subject matter.

Table 1. Data Sample of Facilitating Comprehension of English Materials

Respondent	Statements
Student 3	"Help understand English-language journals."
Student 6	"MT helps me understand English material by translating difficult vocabulary or terms so that I can immediately grasp the content of the text."
Student 7	"MT helps understand English course material by translating difficult vocabulary and terms."
Student 12	"I can understand the course material more easily and follow along better."

Improving Learning Efficiency

Students regarded MT as a tool that saves time and minimizes the effort required to understand English resources. Participants could get instant translations and concentrate on comprehending the overall content rather than manually looking up meanings. Many students underlined that MT helped them better manage learning activities and expedited the completion of academic work.

Table 2. Data Sample of Improving Learning Efficiency

Respondent	Statements
Student 4	"MT is very practical and can translate in a matter of seconds."
Student 6	"MT can save time and allow to focus directly on the overall meaning of the text."
Student 14	"I don't have to spend a lot of time looking up the meaning of every word manually, so I can focus more on understanding the material."
Student 23	"It's easier and faster to find the translation than by using a dictionary."

Supporting Academic Tasks

The analysis showed that MT is widely used to support academic activities. Students reported utilizing MT when reading journal articles, understanding assignment instructions, translating academic texts, and preparing written assignments. Many students viewed MT as an essential academic support tool that reduces language barriers when dealing with English language resources.

Table 3. Data Sample of Supporting Academic Tasks

Respondent	Statements
Student 6	"I use MT when reading English journal, preparing assignment drafts, and checking whether my interpretation is correct."
Student 7	"MT helps to translate complex task instructions."
Student 14	"I use MT when reading international journals."
Student 20	"Help to translate articles and understand assignment instructions."

Simple and User-Friendly Interface

The analysis showed that students perceive machine translation tools as a highly accessible and easy to master. Participants highlighted that MT demands minimal cognitive effort, attributing this to its intuitive interfaces, uncomplicated features, and straightforward processing. Consequently, learners were able to navigate MT applications effectively from the outset, requiring no formal training or specialized technical knowledge.

Table 4. Data Sample of Simple and User-Friendly Interface

Respondent	Statements
Student 2	"It's very easy to use with simple features."
Student 9	"Easy because it's practical."
Student 18	"The application is simple and easy to operate."
Student 24	"Has a simple and easy to understand interface."

Easy Accessibility

Students highlighted that machine translation tools are highly accessible, allowing them to work seamlessly across smartphones, laptops, and web browsers without time or location constraints. Furthermore, the availability of free access has significantly driven their widespread adoption among the student population.

Table 5. Data Sample of Easy Accessibility

Respondent	Statements
Student 5	"It is easy to access and responds quickly whenever I need it."
Student 13	"Can be opened anywhere and practical."
Student 17	"It is available through websites and mobile devices without difficulty."
Student 18	"Easy to access because it's free and available on various devices."
Student 21	"Can be used via smartphone or computer at any time."

Quick Translation Process

Students highlighted the speed of MT as one of its most valuable features. Students appreciated the ability to obtain instant translations, which allows them to maintain their learning flow without interruptions. Quick translation is considered as particularly useful when working under time constraints or deadlines.

Table 6. Data Sample of Quick Translation Process

Respondent	Statements
Student 2	"Speed up the translation process from a regular dictionary."
Student 9	"The translation result immediately appears."
Student 16	"MT instantly translates difficult words and sentences."
Student 17	"Fast translation so it doesn't hinder the learning flow."

MT as More than a Translation Tool

A significant number of participants noted that the utility of MT extends far beyond literal translation. Through consistent exposure to translated materials, students found themselves absorbing vocabulary, grammatical patterns, syntax, and contextual nuances. These insights indicate that MT functions not only as a functional tool but also as a catalyst for language acquisition.

Table 7. Data Sample of MT as More than a Translation Tool

Respondent	Statements
Student 4	"MT not only functions as a translation tool, but also helps the English learning process."
Student 7	"By comparing the original text with the translated version, I learn grammar patterns, new vocabulary, and academic writing style."
Student 14	"MT helps me understand meaning, context, vocabulary use in different situations, and sentence structures."
Student 15	"Help understand new vocabulary and sentence structure."
Student 22	"Learning tools for students."

Scaffolding for English Learning

The findings show that machine translation acts as a safety net whenever students hit a language barrier. Whether they were stuck on unfamiliar words, tangling with complex academic papers, or tackling tough assignments, students turned to MT for quick help.

Table 8. Data Sample of Scaffolding for English Learning

Respondent	Statements
Student 5	"When confused about an English vocabulary."
Student 12	"Help to get an overview of the content of the material."
Student 20	"Help to understand difficult material without many obstacles."
Student 25	"MT supports me whenever I encounter unfamiliar English words."

Reducing Fear of Making Mistakes

The students highlighted the role of MT in mitigating language anxiety. The ability to check meanings, grammar, and translations made students feel more secure when completing assignments and reading English materials. As a result, students become more confident in understanding texts or making language-related mistakes.

Table 9. Data Sample of Reducing Fear of Making Mistakes

Respondent	Statements
Student 3	"I feel confident because I'm not fear of misunderstanding."
Student 4	"I feel more confident because I understand the translated words and sentences."
Student 16	"MT helps to understand and do the task with more confidence."
Student 25	"Reduce errors in understanding the meaning of words or sentences."

Validation of Understanding

The findings revealed that MT helps students ensure accurate understanding of English-language materials. Participants reported using MT to verify the meaning of unfamiliar vocabulary, complex sentences, and academic texts, particularly when completing assignments or reading journals. This process helped them avoid misunderstanding and increased their confidence in interpreting English materials. Therefore, MT serves not only as a translation tool but also as a resource for confirming comprehension during learning.

Table 10. Data Sample of Validation of Understanding

Respondent	Statements
Student 1	"Help to validate my understanding of foreign language."
Student 6	"Make sure my interpretation of the English text is correct."
Student 7	"I use MT to check the meaning and sentence structure before finalizing my assignment."
Student 11	"Help to make sure my work results are correct or not."
Student 21	"MT also helps me make sure whether my work is correct or not."

Discussion

The findings of this study indicate that non-English major students generally hold positive perceptions toward the use of MT in English language learning. The results revealed that students perceive MT as a useful tool that facilitates comprehension of English materials, improves learning efficiency, supports academic tasks, and helps ensure accurate understanding of English texts. These findings suggest that MT plays an important role in helping students overcome language barriers, particularly when dealing with unfamiliar vocabulary, academic terminology, and English-language references. This finding is supported by Fadlan et al. (2024), who reported that MT assists students in understanding English texts and facilitates the translation process more effectively. Given that the participants in this study learned English only as a general course and had limited exposure to English language literature, MT became an important learning resource that enabled them to access and understand English materials more effectively. This finding is also consistent with (Munawwarah & Martriwati, 2024) and (Rahmawati et al., 2025), who reported that students generally perceive MT positively because it facilitates comprehension, supports academic tasks, and improves the efficiency of English language learning.

These findings can be explained through the concept of perceive usefulness in the Technology Acceptance Model (TAM). According to TAM, users are more likely to adopt a technology when they believe that it enhances their performance and productivity (Venkatesh et al., 2000). In the present study, the students reported that MT helped them understand

English materials more quickly, reduced the time needed to complete academic tasks, and enabled them to verify their understanding of texts. The themes of Facilitating Comprehension of English Materials, Improving Learning Efficiency, and Supporting Academic Tasks, demonstrate that they regard MT as a valuable tool that contributes positively to their learning process. These findings support previous research which found that the perceived usefulness of MT encourages students to integrate translation technologies into their learning activities (Cahyani et al., 2025).

The study also found that the students considered MT easy to learn and use. The themes of Simple and User-Friendly Interface, Easy Accessibility, and Quick Translation Process indicate that students appreciate MT applications because of their intuitive interface, simple features, instant translation results, and accessibility across multiple devices. Many students emphasized that MT applications can be used anytime and anywhere without requiring extensive technical knowledge. These findings correspond to the perceive ease of use construct of TAM, which states that users are more likely to accept and use technology when it requires minimal effort to operate (Davis, 2014). The ease of use reported by participants appears to strengthen their willingness to rely on MT as a regular learning companion in both academic and non-academic contexts. This result is also in line with previous studies highlighting accessibility and convenience as important factors influencing students' acceptance of MT technologies (Rahmawati et al., 2025).

Beyond its practical benefits, the findings suggest that the students perceive MT as more than a translation application. The themes of MT as More than a Translation Tool and Scaffolding for English Learning indicate that the students use MT not only to obtain translations but also to learn vocabulary, sentence structures, grammar patterns, and contextual language usage. They explained that comparing the source text with the translate output enabled them to acquire new language knowledge and better understand English materials. This finding supports the sociocultural perspective that learning occurs through interaction with mediational tools that assist learners in accomplishing tasks beyond their current level of competence (Grageda et al., 2022). In this context, MT functions as a mediational tool that provides linguistic support and facilitates learning by helping students bridge gaps in their language proficiency.

Another significant finding concerns the role of MT in fostering students' confidence. The theme Reducing Fear of Making Mistakes demonstrated that MT helps the students feel more secure when reading English texts, interpreting instructions, and completing academic assignments. They reported that MT reduced their anxiety about misunderstanding vocabulary, grammar, or text meanings, allowing them to engage more confidently with English-language materials. This finding reflects the concept of scaffolding in sociocultural theory, whereby learners receive temporary support that enables them to perform tasks they might otherwise find difficult to complete independently. MT encourages the students to participate more actively in learning activities and reduces the psychological barriers often associated with learning a foreign language.

Overall, the findings demonstrate that MT plays a multifaceted role in supporting English language learning among non-English major students. The students perceive MT as a useful, accessible, and easy to use technology that facilitates comprehension, enhances learning efficiency, supports academic tasks, and promotes confidence in learning English. More importantly, the findings reveal that MT functions not only as a translation tool but also as a learning support resource that provides scaffolding and assists the students in engaging with English-language materials. These findings contribute to the existing literature by providing insights into the perceptions of students who study English only as a general course and who have relatively limited exposure to English-language literature, a population that has received limited attention in previous MT research.

CONCLUSIONS

This study concludes that non-English major students generally perceive machine translation (MT) positively and consider it a useful support tool for English language learning. MT helps students understand English materials, complete academic tasks more efficiently,

expand vocabulary, recognize sentence structures, and access language assistance quickly. Its ease of use and accessibility also contribute to students' confidence and reduce anxiety when working with English-language materials. These findings indicate that MT can function not only as a translation tool but also as a learning support that helps students overcome language barriers, particularly those with limited English proficiency and exposure to authentic English materials. The findings are consistent with the Technology Acceptance Model, particularly the concepts of perceived usefulness and perceived ease of use, while also supporting the view of technology as a mediational tool in language learning. The study contributes to MT research by highlighting the experiences of non-English department students, a group that has received comparatively limited attention in previous research.

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