

Students' Perceptions of Using AI-Generated Translators in Translation based on the UTAUT

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ABSTRACT

This research aimed to describe students' perceptions of using AI-generated translators based on the Unified Theory of Acceptance and Use of Technology (UTAUT) framework and to identify the AI-generated translator most frequently used by students. This research used a descriptive quantitative design involving 120 students from the English Language Education Study Program at Universitas Tanjungpura, selected through purposive sampling. Data were collected using a questionnaire based on three UTAUT constructs: performance expectancy, effort expectancy, and facilitating conditions. Social Influence construct was excluded because two items were not valid and one item alone was not enough to represent a construct. The data were analyzed using descriptive statistics, including mean scores, standard deviations, frequencies, and percentages. The findings showed that all UTAUT constructs were categorized as "Very Positive" and "Positive," indicating that students had positive perceptions of using AI-generated translators in learning English. The findings also showed that DeepL was the most frequently used AI-generated translator, chosen by 58.3% of the students, followed by Google Translate (25.8%) and ChatGPT (13.3%). In conclusion, students had positive perceptions of AI-generated translators and considered them useful and easy to use for translation activities. Therefore, AI-generated translators can be used as supporting tools in EFL translation activities.

Keywords: *AI-Generated Translators, UTAUT, Perception*

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INTRODUCTION

Artificial intelligence (AI) has become a global phenomenon that has transformed various sectors of life, including education. In recent years, AI technology has increasingly entered classrooms and become part of the teaching and learning process. AI is considered important in modern education because of its potential to improve learning efficiency, accessibility, and technology-based learning support (Ahmad et al., 2025). One of the commonly used forms of AI in language learning is AI-generated translation technology, including Google Translate, DeepL, and ChatGPT, which enables users to translate texts from one language to another quickly and easily. This development has also attracted increasing attention in translation research because of the ability of AI-based tools to produce increasingly human-like translations (Asi et al., 2024).

In the context of learning English as a foreign language (EFL), AI-generated translators provide practical solutions to language-related challenges, particularly in understanding English texts. Tymchyk & Drabov, (2025) explain that AI-generated translation tools, such as Google Translate, DeepL, and ChatGPT, employ various machine translation approaches, including rule-based, statistical, and neural systems, to improve translation efficiency and accuracy, particularly when dealing with specialized terminology. Nevertheless, translations that are sensitive to context still require human revision because AI-generated translations may not always accurately capture the intended meaning. Therefore, although these technologies provide substantial assistance, their use still requires users to critically evaluate the translation results.

Previous research has demonstrated that machine translation can support foreign language learning, particularly in understanding vocabulary, sentence structures, and textual meaning. However, its use needs to be appropriately integrated into the learning process so that technology does not replace students' active engagement and independent learning (Urlaub & Dessein, 2022). In EFL contexts, AI-generated translators such as Google Translate and DeepL have been widely used by students to support various English learning activities, including reading, writing, and translation tasks (Ghorianfar et al., 2023; Rohmah et al., 2023; Tian, 2024). These findings indicate that AI-generated translators have moved beyond being simple translation tools and have increasingly become part of students' learning practices.

This situation is also reflected in the preliminary observation conducted through informal interviews with students from the English Language Education Study Program at Universitas Tanjungpura. The findings indicated that most students had used AI-generated translators to translate English into Indonesian and vice versa, particularly when they encountered unfamiliar vocabulary, expressions, or sentences in English texts. For many students, these tools had become part of their regular translation strategies rather than merely optional resources. This condition suggests that AI-generated translators have become integrated into students' translation practices in EFL learning.

However, the increasing use of AI-generated translators also raises questions concerning how students perceive these technologies in their learning process. Students may perceive AI-generated translators as learning assistants that facilitate their understanding of translation, vocabulary, and sentence structures. On the other hand, they may also perceive these tools as shortcuts that reduce their effort to independently understand and produce translations. Therefore, the frequent use of AI-generated translators does not necessarily indicate that students perceive them positively or use them appropriately. This condition highlights the need to systematically investigate students' perceptions of AI-generated translators, particularly when the tools are used in translation activities within EFL learning.

Several previous studies have examined the integration of AI technologies into language learning and have generally reported positive perceptions regarding their usefulness and ease of use (Ardiningtyas et al., 2024; Rahmani, 2023). Research employing the Unified Theory of Acceptance and Use of Technology (UTAUT) framework has also demonstrated that technology acceptance is influenced not only by perceived usefulness and ease of use but also by social and environmental factors (Liang, 2025; Yakubu et al., 2025). Nevertheless, previous research on AI in language learning has largely focused on writing activities, behavioral intention, or general AI usage. Research specifically investigating students' perceptions of AI-generated translators in translation activities within EFL learning remains limited. Furthermore, students' perceptions based specifically on the UTAUT constructs of Performance Expectancy, Effort Expectancy, and Facilitating Conditions have not been comprehensively explored in the context of translation activities.

The Unified Theory of Acceptance and Use of Technology (UTAUT), proposed by Venkatesh et al., (2003), therefore serves as the principal theoretical framework for the present research. UTAUT provides a more comprehensive explanation of technology acceptance than the Technology Acceptance Model (TAM). While TAM primarily emphasizes perceived usefulness and perceived ease of use, UTAUT conceptualizes these aspects as Performance Expectancy and Effort Expectancy and additionally incorporates Social Influence and Facilitating Conditions (Abbad, 2021). In this research, the framework provides a basis for examining whether students perceive AI-generated translators as useful and easy to use, as well as whether the availability of supporting conditions facilitates their use of these technologies in translation activities.

Therefore, this research aims to investigate students' perceptions of AI-generated translators in translation activities within EFL learning based on the UTAUT framework. Specifically, the research focuses on students' perceptions of Performance Expectancy, Effort Expectancy, and Facilitating Conditions in using AI-generated translators. By examining these dimensions, the research is expected to provide a clearer understanding of how students perceive the role of AI-generated translators in their translation learning practices. The

findings are expected to provide useful information for lecturers and educational institutions in developing appropriate strategies for integrating AI-generated translators into EFL learning, ensuring that these technologies function as effective learning assistants while maintaining students' independence, critical thinking, and active engagement in the translation process.

METHOD

Research Design

This research used a descriptive quantitative design to investigate students' perceptions of using AI-generated translators particularly DeepL and Google Translate in learning English based on the Unified Theory of Acceptance and Use of Technology (UTAUT). Descriptive research aimed to present data as they naturally occur, without any manipulation or treatment from the researcher, and was commonly conducted through surveys or questionnaires. This statement was supported by (Welsh et al., 2023) who stated that, descriptive research provided information based on observation and showed things the "way they are" using surveys, questionnaires, rubrics, interviews, or rankings.

Furthermore, a quantitative approach was appropriate for this research because the data collected were in the form of numerical responses obtained from a Likert-scale questionnaire. Creswell & Creswell, (2018) stated that quantitative methods involved the systematic process of collecting, analyzing, interpreting, and writing the findings of research, while Balog (2020) stated that quantitative methods referred to calculations involving numeric values, which were sometimes called statistical calculations. Therefore, this design was suitable for describing students' perceptions regarding performance expectancy, effort expectancy, and facilitating conditions related to the use of AI-generated translators.

Participants

The participants of this research were 120 students from the English Language Education Study Program at Universitas Tanjungpura. Purposive sampling was used as the sampling technique because participants were selected based on specific characteristics that were relevant to the purpose of the research (Andrade, 2021). The participants were selected based on the following criteria: (1) Active students of English Language Education Study Program, (2) Students from batches 2022 to 2024, which represented students in semester four, six, and eight, and (3) Students who had experience using AI-generated translators, such as Google Translate or DeepL, to support English learning, specifically for translation purposes.

Instruments

Data were collected using a closed-ended questionnaire distributed through Google Forms from March 4 to 9, 2026. A questionnaire was selected because it enables researchers to collect data from a relatively large number of participants effectively and systematically. Cleland et al., (2024) stated that a questionnaire is an instrument for collecting data that includes a set of questions to answer a research question, and statistical techniques are typically used to analyze the results. The questionnaire was adapted from the UTAUT-based instrument developed by (Wahyuningsih & Suhartono, 2025). The original instrument was modified to fit the context of AI-generated translators in English language learning especially in translation activities. The questionnaire consisted of three constructs of the UTAUT framework, namely effort expectancy, performance expectancy, and facilitating condition. Students' responses were measure using a five-point Likert scale ranging from strongly disagree (1) to strongly agree (5). According to South et al. (2022), Likert scales enable researchers to gather respondents' subjective data, which provides important insights into how users view and interact with the provided visualizations. In addition, a multiple-choice question to identify the AI-generated translators most frequently used by students in learning English especially in translation, such as DeepL and Google Translate.

The questionnaire was tested by a small group of 30 respondents who had characteristics that matched the sample of this research. The results were analyzed using

Corrected Item-Total Correlation to test the validity of the instrument items, While the reliability test was conducted using the Cronbach's Alpha method to calculate the internal consistency of the questionnaire.

Creswell & Creswell., (2018) explained that validity refers to the extent to which an instrument accurately measures, whereas reliability refers to the consistency of an instrument. Most questionnaire items met the correlation values above 0.3 and demonstrated acceptable reliability. The social influence construct was removed because their correlation values were below 0.3 and one item alone is not enough to represent a construct.

Data Analysis

The collected data were analyzed using descriptive statistics with SPSS version 26. Descriptive statistics are used to organize and summarize data to facilitate comprehension, frequently using metrics such as mean score, median, mode, and standard deviation, which are critical for analyzing research findings (Sanchez, 2023).

Mean scores and standard deviation were calculated to describe students' perceptions of using AI-generated translators in English learning, while frequencies and percentages were used to identify the AI-generated translators most frequently used by students (Alabi & Bukola, 2023). The interpretation of mean score, ranging from Very Negative to Very Positive.

Table 1. Verbal Interpretation of Mean Scores

Rate	Verbal Interpretation	Range
5	Very Positive	4.21 - 5.00
4	Positive	3.41 - 4.20
3	Moderate	2.61 - 3.40
2	Negative	1.81 - 2.60
1	Very Negative	1.00 - 1.80

FINDINGS AND DISCUSSION

Findings

This section presented the findings of the research based on the data collected from students through questionnaires. The data were obtained using a Likert-scale questionnaire and were analysed using descriptive statistics. The analysis aimed to describe students' perceptions of using AI-generated translators in learning English based on the Unified Theory of Acceptance and Use of Technology (UTAUT), including performance expectancy, effort expectancy, and facilitating conditions. In addition, the analysis also aimed to identify the AI-generated translator most frequently used by the students. The details of the finding were presented in the following sub sections.

Students' Perceptions based on the UTAUT

The mean scores were interpreted using the criteria presented in Table 1. A mean between 3.41-4.20 was categorized as "Positive," indicated a positive perception. A mean between 4.21-5.00 was categorized as "Very Positive," indicated a very positive perception.

Effort Expectancy Construct

Table 2. The Effort Expectancy

No Items	Statements	Mean Score	Standard Deviation
1.	Saya merasa mudah menggunakan AI-generated translator untuk membantu menerjemahkan teks Bahasa Inggris.	4.29	0.844
2.	Saya dapat menggunakan AI-generated translator tanpa mengalami kesulitan.	4.38	0.735
3.	Saya tidak membutuhkan waktu lama untuk mempelajari cara menggunakan AI-generated translator.	4.43	0.752
Total		4.36	

As shown in table 2, the Effort Expectancy construct received total of mean scores 4.36, categorized as "Very Positive". The highest mean was for item 3 ("Saya tidak membutuhkan waktu lama untuk mempelajari cara menggunakan AI-generated translator") with a mean of 4.43 (SD=0.752). Item 2 ("Saya dapat menggunakan AI-generated translator tanpa mengalami kesulitan") had mean of 4.38 (SD=0.735), and item 1 ("Saya merasa mudah menggunakan AI-generated translator untuk membantu menerjemahkan teks Bahasa Inggris") had a mean of 4.29 (SD=0.844). The standard deviations were relatively low (0.735-0.844), indicated that students' responses were consistent.

Performance Expectancy Construct

Table 3. The Performance Expectancy

No Items	Statements	Mean Score	Standard Deviation
4.	AI-generated translator membantu saya memahami arti teks bahasa Inggris.	4.33	0.676
5.	AI-generated translator membantu saya meningkatkan kualitas terjemahan saya.	4.09	0.756
6.	Hasil terjemahan dari AI-generated translator mudah saya pahami.	4.08	0.705
7.	AI-generated translator membantu saya belajar kosakata baru dalam bahasa Inggris.	4.24	0.674
8.	AI-generated translator membantu saya belajar struktur kalimat bahasa Inggris.	3.77	0.764
Total		4.10	

As shown in table 3, the Performance Expectancy construct received total of mean scores 4.10, categorized as "Positive". The highest mean was for item 4 ("AI-generated translator membantu saya memahami arti teks bahasa Inggris") with a mean of 4.33 (SD=0.676). Item 5 ("AI-generated translator membantu saya meningkatkan kualitas terjemahan saya") had mean of 4.09 (SD=0.756). Item 6 ("Hasil terjemahan dari AI-generated translator mudah saya pahami") had a mean of 4.08 (SD=0.705). Item 7 ("AI-generated translator membantu saya belajar kosakata baru dalam bahasa Inggris") had a mean of 4.24 (SD=0.674). The lowest mean was for item 8 ("AI-generated translator membantu saya belajar struktur kalimat bahasa Inggris") with a mean of 3.77 (SD=0.764). The standard deviations were relatively low (0.676-0.764), indicated that students' responses were consistent.

Facilitating Conditions Construct

Table 4. The Facilitating Conditions

No Items	Statements	Mean Score	Standard Deviation
9.	AI-generated translator dapat digunakan dengan baik pada perangkat digital yang saya miliki.	4.41	0.615
10.	Saya memiliki pengetahuan yang cukup untuk menggunakan AI-generated translator dalam pembelajaran bahasa Inggris.	4.29	0.585
11.	Versi gratis AI-generated translator sudah cukup mendukung kebutuhan belajar bahasa Inggris saya.	4.08	0.811
12.	Saya dapat mengakses AI-generated translator kapan pun saya membutuhkannya untuk belajar.	4.37	0.660
Total		4.28	

As shown in table 4, the Facilitating Conditions construct received total of mean score 4.28, categorized as "Very Positive". The highest mean was for item 9 ("AI-generated translator dapat digunakan dengan baik pada perangkat digital yang saya miliki") with a mean of 4.41 (SD=0.615). Item 10 ("Saya memiliki pengetahuan yang cukup untuk menggunakan AI-generated translator dalam pembelajaran bahasa Inggris") had mean of 4.29 (SD=0.585). Item 12 ("Saya dapat mengakses AI-generated translator kapan pun saya membutuhkannya untuk belajar") had a mean of 4.37 (SD=0.660). The lowest mean was for

item 11 ("Versi gratis AI-generated translator sudah cukup mendukung kebutuhan belajar bahasa Inggris saya") with a mean of 4.08 (SD=0.811). The standard deviations were relatively low (0.585-0.811), indicated that students' responses were consistent.

Most frequently used AI-generated translator

In addition to investigating students' perceptions, this research also identified the AI-generated translator most frequently used by students.

Table 5. Most frequently used AI-generated Translators

Translators	Code	Frequency	Percentage
DeepL	1	70	58.3
Google Translate	2	31	25.8
ChatGPT	3	16	13.3
Gemini	4	1	0.8
Perplexity	5	1	0.8
Quillbot	6	1	0.8
Total		120	100.0

As presented in table 5, a total of 120 students responded. The results showed that "DeepL" was the most frequently used AI-generated translator, with 70 students (58.3%). Google Translate was the second most used, chosen by 31 students (25.8%). In addition, there were other AI-generated translators that were included in the other tools option and were used by students in learning, namely ChatGPT which was used by 16 students (13.3%), and translators such as Gemini, Perplexity, and Quillbot, each of which was used by only 1 student (0.8%).

These findings indicated that DeepL was the most frequently used AI-generated translator among students in learning English, followed by Google Translate and ChatGPT.

Discussions

Based on the findings of this research, students generally had positive perceptions of using AI-generated translators in learning English, especially in translation activities. All UTAUT constructs, namely Effort Expectancy obtained the highest overall mean score (M=4.36), followed by Facilitating Conditions (M=4.28) and Performance Expectancy (M=4.10), were categorized as "Very Positive" and "Positive," which indicated that students perceived AI-generated translators as useful, easy to use and supportive tools in translation activities. The relatively low standard deviations across the three constructs (Effort Expectancy: SD= 0.735-0.844; Performance Expectancy: SD= 0.674-0.764; Facilitating Conditions: SD= 0.585-0.811) also indicated that students' responses were generally consistent.

These findings answered the first research question regarding students' perceptions of the use of AI-generated translators. In addition, the findings also answered the second question regarding the most frequently used AI-generated translator, where DeepL was identified as the most frequently used AI-generated translator among students (58.3%), followed by Google Translate (25.8%) and ChatGPT (13.3%). The preference for DeepL may be associated with students' perceptions of its translation quality and naturalness, especially when translating academic texts. These findings support Rohmah et al. (2023), who reported that DeepL is recognized for providing more accurate and natural translation results, particularly for academic texts. The results also indicate that although Google Translate remains popular because of its accessibility (Ghorianfar et al., 2023), students increasingly prefer alternative AI-generated translators that provide higher translation quality.

The findings showed that effort expectancy had the highest mean score (M=4.36), indicated that students perceived AI-generated translators as easy to learn and easy to use. Individual item scores ranged from 4.29 (SD= 0.844) to 4.43 (SD=0.752), with relatively low standard deviations, suggesting that students shared similar perceptions regarding the ease of using AI-generated translators. Most students felt that they did not require much time to learn how to use AI-generated translators effectively. This finding reflected that the simplicity and

accessibility of AI-generated translators became one of the main reasons why students frequently used them in translation activities. The finding was consistent with the theory proposed by (Venkatesh et al., 2003), which stated that effort expectancy refers to the ease of use of a technology. The result also supported previous research conducted by (Rahmani, 2023), which found that students had strongly positive perceptions regarding the ease of use of AI-based tools in language learning. This finding suggested that students tended to accept technologies that were simple, practical, and flexible to use in their daily academic activities.

In terms of performance expectancy, the construct obtained an overall mean score of 4.10, indicating a positive perception of the usefulness of AI-generated translators in supporting translation activities. The item mean scores ranged from 3.77 (SD=0.764) to 4.33 (SD= 0.676), while the relatively low standard deviations (SD= 0.674-0.764) indicate that students' responses were consistent. The highest mean score in this construct is 4.33 (SD= 0.676), indicated that AI-generated translators helped students understand the meaning of English texts more easily. However, the lowest mean score was 3.77 (SD= 0.764), found in the statement related to learning sentence structure, which indicated that students were less certain about the effectiveness of AI-generated translators in improving deeper language aspects such as grammar and sentence structure. This finding suggested that AI-generated translators were perceived as more effective for assisting comprehension and translation rather than developing productive language skills. This result was in line with (Venkatesh et al., 2003), who explained that performance expectancy refers to perceived usefulness of technology in improving performance. The finding is consistent with the previous studies by (Ardiningtyas et al., 2024; Yakubu et al., 2025), which showed that students perceived AI tools positively because they improved learning efficiency and task completion. However, this research also highlighted that students still recognized the limitations of AI-generated translators in supporting deeper language mastery. Therefore, AI-generated translators could support learning activities, but they could not fully replace students' own language learning processes and critical thinking skills.

The findings on facilitating conditions showed an overall mean score of 4.28, indicating that students generally had sufficient technological support to use AI-generated translators effectively. The mean scores in this construct ranged from 4.08 (SD= 0.811) to 4.41 (SD= 0.615), with relatively low standard deviations (SD= 0.585-0.811), suggesting that students' responses were generally consistent. These findings indicate that students had access to digital devices, internet connection, and knowledge to use AI-generated translators. This finding suggested that the availability of supporting resources influenced students' positive perceptions toward the use of AI-generated translators. The result supported the theory proposed by (Venkatesh et al., 2003), which explained that facilitating conditions refer to the availability of resources that enable the use of the technology. In the context of this research, the availability of smartphones, laptops, and internet access allowed students to integrate AI-generated translators into their learning activities more easily.

In addition to the three UTAUT constructs, the findings could also be interpreted from the perspective of ethical AI use in education. The findings showed that students perceived AI-generated translators as tools that helped them understand English texts, complete translation tasks, and access learning support more easily. However, the relatively lower mean score related to learning sentence structure (M=3.77, SD=0.764) suggests that students did not fully rely on AI-generated translators to develop deeper language knowledge. This finding indicates that students generally viewed AI-generated translators as learning support tools rather than complete replacements for their own learning efforts. This perspective is consistent with (Rifqi & Abbas, 2025), who argue that AI should function as an assistant that supports learning rather than replacing human thinking and cognitive processes. Therefore, the findings suggest that students were aware of the benefits of AI-generated translators while still recognizing the importance of their own involvement in the translation process.

The findings of this research also strengthened previous studies related to the use of AI in education while at the same time showing several differences. Previous studies mainly focused on AI use in writing activities, academic writing, or general technology acceptance. In

contrast, this research specifically focused on students' perceptions of AI-generated translators in translation activities within the EFL context. This research also used the UTAUT framework to describe students' perceptions through three constructs: performance expectancy, effort expectancy, and facilitating conditions. These constructs were selected because they directly represent students' perceptions regarding the usefulness, ease of use, and supporting resources related to AI-generated translators. In addition, this research highlighted the importance of using AI-generated translators ethically as learning support tools rather than as replacements for students' own learning efforts. Therefore, this research provided a more specific understanding of how students perceived AI-generated translators in translation activities.

Theoretically, this research contributed to the application of the UTAUT framework in the context of AI-generated translators in EFL learning. The findings confirmed that UTAUT could be used to explain students' acceptance and perceptions of AI-generated translators in translation activities. In addition, this research expanded previous studies by focusing specifically on translation activities rather than general AI use or writing activities. Practically, the findings of this research could provide useful information for lecturers and educational institutions regarding how students perceive the use of AI-generated translators. The findings indicated that AI-generated translators could support students' understanding and translation activities when used appropriately. Therefore, lecturers could integrate AI-generated translators into learning activities while still encouraging students to think critically and independently evaluate translation results.

This research also had several implications. The findings suggested that AI-generated translators had become part of students' learning strategies in English learning, especially in translation activities. Since students perceived these tools positively, lecturers and educational institutions needed to provide appropriate guidance regarding the ethical and effective use of AI-generated translators in academic contexts. In addition, students also needed to understand that AI-generated translators should function as supporting tools rather than replacements for learning processes. Students still needed to actively analyze, revise, and evaluate translation results to develop their language competence more effectively. From an ethical perspective, students should be encouraged to use AI-generated translators can assist students in understanding vocabulary, expressions, and text meaning, but students should avoid relying entirely on AI outputs without critical evaluation. Ethical use of AI-generated translators required students to remain actively involved in analyzing, revising and learning from the translation results rather than simply accepting the outputs as their own work.

However, this research also had several limitations. First, the number of participants in this research was limited to 120 students from English Language Education Study Program, which might not fully represent broader student populations. Second, this research only focused on translation activities in English learning. Third, the duration of the research was relatively short, which limited deeper observation of students' long-term use of AI-generated translators. Fourth, this research only examined three UTAUT constructs, namely performance expectancy, effort expectancy, and facilitating conditions. The social influence construct was not included in the final analysis because the related questionnaire items did not meet the validity criterion. Therefore, this research did not explore how lecturers, friends, or other social factors might influence students' perceptions of using AI-generated translators. Finally, this research mainly focused on DeepL and Google Translate as the most commonly used AI-generated translators.

CONCLUSIONS

Based on the findings, it can be concluded that students generally had positive perceptions of using AI-generated translators in learning English based on the Unified Theory of Acceptance and Use of Technology (UTAUT). The findings indicate that AI-generated translators are increasingly accepted as learning support tools that facilitate translation activities and English learning. Facilitating conditions, particularly access to internet

connections and digital devices, also played an important role in enabling effective use. Furthermore, AI-generated translators had become part of students' learning strategies, especially for supporting comprehension and translation-related tasks. However, some students showed signs of dependency, which may affect their independent learning and critical thinking. Therefore, these tools should be used appropriately as complementary learning support rather than replacements for students' own efforts. Overall, the study demonstrates that UTAUT can effectively explain students' acceptance of AI-generated translators in EFL translation activities and provides empirical evidence for their responsible integration into English language education.

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