

# Investigating Students' Perceptions of Using Artificial Intelligence Tools in Translation

Suha Alradad\* 

Department of English, Tripoli University, Tripoli, Libya

[s.elradad@uot.edu.ly](mailto:s.elradad@uot.edu.ly)

**Keywords:**  
*Students' Perceptions*  
*Artificial Intelligence*  
*Translation Pedagogy*  
*AI Dependency*  
*Translation*  
*Competence*

## ABSTRACT

This study investigated undergraduate students' perception of using Artificial Intelligence (AI) tools in translation and their relationship with self-perceived translation competence. A quantitative approach was adopted using a questionnaire administered to 50 translation students at Tripoli University. The results indicates that ChatGPT is the most widely used AI tool and students mainly utilize AI for vocabulary search and terminology check. The results also indicate that students are aware of the limitations associated with excessive reliance on AI tools. The study highlights the importance of integrating AI tools into translation pedagogy while promoting independent translation skills and critical thinking.

تصورات الطلبة حول استخدام أدوات الذكاء الاصطناعي في الترجمة

سهى الرداد

الملخص

هدفت هذه الدراسة إلى استكشاف تصورات طلبة المرحلة الجامعية حول استخدام أدوات الذكاء الاصطناعي في الترجمة، وعلاقتها بكفاءتهم الذاتية في الترجمة. واعتمدت الدراسة المنهج الكمي من خلال استبانة طبقت على 50 طالباً بقسم الترجمة في جامعة طرابلس. وأظهرت النتائج أن ChatGPT هو الأداة الأكثر استخداماً، وأن الطلبة يوظفون أدوات الذكاء الاصطناعي أساساً في البحث عن المفردات والتحقق من المصطلحات. كما بينت النتائج إدراكهم لمخاطر الاعتماد المفرط على هذه الأدوات. وتوصي الدراسة بدمج أدوات الذكاء الاصطناعي في تعليم الترجمة مع تعزيز مهارات الترجمة المستقلة والتفكير النقدي.

الكلمات المفتاحية:  
الاعتماد على الذكاء الاصطناعي،  
الذكاء الاصطناعي، تصورات  
الطلبة، تعليم الترجمة، كفاءة  
الترجمة.



Check for updates

**Received:** 09 July 2026 **Revised:** 22 July 2026. **Accepted:** 05 August 2026 **Published:** 1 September 2026

**Copyright:** © 2026 by the authors. Licensee FLJ. This article is an open access article distributed under the terms and conditions of the [Creative Commons Attribution \(CC BY\) license](https://creativecommons.org/licenses/by/4.0/)

## Introduction

Artificial intelligence (AI) has become a corner stone in influencing language learning and translation studies. AI Tools such as machine translation systems and AI-powered writing assistants have provided students with unprecedented access to continuous translation support, which offer immediate translations. This technological development has reshaped how students approach translation tasks. The translation process is a multidimensional cognitive and linguistic task which requires not only bilingual proficiency but also understanding of context, culture, and meaning. However, the spread of AI-assisted workflows has introduced a new dimension to this process by allowing students to rely on automated AI tools to produce a quick and efficient translation. This shift raises important questions about how these tools influence students' confidence in their own translation competence. Many translation students in the English department at Tripoli University rely on AI tools in their translation tasks mainly chatgpt and gemini. AI tools had made life easier for students but relying on these tools completely will limit their creativity and their linguistic competence. Recent studies emphasized the role of AI tools in translation pedagogy. AI tools can facilitate the learning process by providing students with the meanings of the words, equivalents, examples, and alternative translation choices which may enhance their understanding of translation strategies (Kenny, 2022). However, there are various concerns regarding the over-reliance on AI tools, as the over-reliance may decrease students' cognitive skills and analytical abilities (Mellinger, 2018). This challenge sheds the light on the importance of developing a balanced approach in which AI tools are utilized as extra sources rather than a total substitute for the translator. Another significant concern is that AI tools are unable to deal with cultural and contextual aspects of translation. The translation process needs awareness of social, culture, and communicative factors that extend beyond direct linguistic equivalence (House, 2015). Although, pervious studies have examined the use of AI tools in translation pedagogy, limited research investigated students' perceptions of AI use and its relationship with their self-perceived translation competence in the Libyan context.

Therefore, this study seeks to address this gap by investigating how translation students perceive the use of AI tools in their translation practice, examining their patterns of AI use and dependency, and exploring the relationship between AI use and students 'self-perceived translation

competence. The findings are expected to contribute to the growing body of research on AI in translation education and provide insights for educators on how AI tools can be integrated into translation pedagogy in a balanced and pedagogically effective manner.

## **Objectives of the Research**

This research paper aims to investigate students' perceptions of using AI tools in translation. It explores students' patterns and purposes of AI tool use in translation, examines their perceived level of dependency on these tools during translation tasks, and investigates their self-perceived translation competence without AI assistance. In addition, the study examines the relationship between AI use, AI dependency, and students' self-perceived translation competence. Ultimately, the study seeks to provide insights that may support the effective and balanced integration of AI tools into translation pedagogy.

## **Research Questions**

In order to accomplish the objectives of this research, the study attempted to answer the following questions:

- What are the students' perceptions regarding the use of AI in translation?
- To what extent do students perceive themselves as dependent on AI tools during translation?
- What is the relationship between AI use, AI dependency, and students' self-perceived translation competence?

## **Significance of the Research**

This study is essential because it addresses a contemporary controversy in translation pedagogy. As AI tools become more common in everyday life, students need to understand their impact on learning outcomes. The study contributes to the growing body of research on the use of Artificial intelligence in translation education by providing evidence from the Libyan higher education context.

It offers insights into students' perceptions of AI tools, their patterns of

use, and the relationship between AI dependency and self-perceived translation competence. The findings of this research may help translation instructors develop balanced teaching strategies that encourage the responsible use of AI tools with the development of independent translation skills and critical thinking. Furthermore, the study may serve as a reference for future studies investigating the pedagogical implications of AI-assisted translation in similar educational context.

## **Literature Review**

### **Artificial Intelligence in Translation Pedagogy**

Artificial Intelligence (AI) has become one of the most influential technological developments in higher education, particularly in language learning and translation education. Recent advances in AI-powered applications, including ChatGPT, Gemini, DeepL, and Google Translate, have transformed the way translation is taught and practiced by providing immediate linguistic support, terminology suggestions, contextual explanations, and alternative translation options.

Consequently, AI tools are increasingly being integrated into translation pedagogy to support students' learning and enhance their translation experience. Several studies have emphasized the educational benefits of AI integration in translation classrooms. Some scholars argue that AI applications have significantly reshaped educational practices by creating more interactive and learner-centred environments. Similarly, Borge (2016) maintains that AI enables instructors to better monitor students' progress, identify learning difficulties, and provide more personalized support. These studies collectively suggest that AI has the potential to improve teaching effectiveness and enrich students' learning experiences. Within translation education, researchers generally agree that AI tools function as valuable learning aids rather than complete replacements for human translators. Bowker (2020) argues that machine translation literacy has become an essential competence for translation students, enabling them to evaluate AI-generated translations critically rather than accepting them uncritically. Likewise, Kenny (2011) and Doherty and Kenny (2016) emphasize that AI technologies can facilitate translation training by exposing students to multiple translation alternatives and encouraging reflection on translation choices.

Although these studies recognize the pedagogical value of AI, they consistently stress that its effectiveness depends on how it is integrated into teaching and learning practices. Despite this general agreement, the literature also indicates that successful AI integration requires a balanced pedagogical approach. Rather than replacing traditional translation training, AI tools should complement the development of students' linguistic competence, analytical thinking, and decision-making skills. This perspective provides the theoretical foundation for examining students' perceptions of AI use in translation and understanding how these tools influence their learning experiences and self-perceived translation competence.

### **Applications and Benefits of AI Tools in Translation**

The rapid development of Artificial Intelligence has led to the widespread adoption of AI-powered translation tools, including ChatGPT, Gemini, Google Translate, and DeepL. These tools have become valuable resources for translation students because they provide instant translations, vocabulary suggestions, terminology support, grammatical corrections, and alternative expressions. As a result, they enable students to complete translation tasks more efficiently while reducing the time and effort required during the translation process. Previous research has consistently highlighted the educational value of AI-assisted translation tools. Neural Machine Translation (NMT) systems have significantly improved translation quality by producing more fluent and contextually appropriate translations than earlier machine translation models (Wu et al., 2016; Forcada, 2017).

Likewise, Castilho et al. (2018) and Popović (2018) report that recent AI-based translation systems demonstrate substantial improvements in handling longer texts and producing more natural target-language output. These technological advances have contributed to the growing acceptance of AI tools in both professional translation and translation education. Several researchers have emphasized that AI tools support students' language development by facilitating vocabulary acquisition, terminology selection, and grammatical accuracy.

Gaspari et al. (2015) and Doherty (2016) argue that AI-assisted translation provides immediate linguistic support that enables students to overcome

lexical and structural difficulties during translation tasks. Similarly, O'Brien (2012) and Zaretskaya et al. (2015) suggest that comparing AI-generated translations with students' own work encourages reflection and promotes translation learning.

Furthermore, Bowker (2020) maintains that AI tools can strengthen translation competence when students critically evaluate machine-generated output rather than relying on it unquestioningly. Although previous studies generally acknowledge the benefits of AI tools, they also agree that these technologies should function as learning aids rather than complete substitutes for human translators. Their educational value depends largely on students' ability to use AI critically and selectively while maintaining independent translation skills. This balanced perspective provides an important foundation for investigating students' perceptions of AI use in translation and understanding how these tools influence their learning experiences.

### **Students' Perceptions and AI Dependency**

As Artificial Intelligence (AI) tools have become increasingly integrated into translation education, researchers have shown growing interest in understanding students' perceptions of these technologies and the extent to which they rely on them during translation tasks. Students' perceptions play a significant role in determining how AI tools are adopted and whether they are viewed as supportive learning resources or substitutes for independent translation practice. Previous studies indicate that students generally hold positive attitudes toward AI tools because they facilitate translation tasks, improve productivity, and provide immediate linguistic assistance. Kasneci et al. (2023) and Kohnke et al. (2023) report that students perceive generative AI tools as useful for enhancing learning efficiency, generating ideas, and receiving instant feedback.

Similarly, Chan and Hu (2023) found that university students appreciate AI tools because they reduce the time required to complete academic tasks and increase learners' confidence when dealing with unfamiliar vocabulary and expressions. These findings suggest that students value AI primarily as a supportive educational resource rather than merely as a translation tool. Despite these advantages, several studies have raised concerns regarding excessive dependence on AI technologies. Mellinger (2018) argues that over-reliance on translation technologies may reduce students'

active engagement in the translation process and limit the development of essential analytical and problem-solving skills. Likewise, Pym (2013) and Moorkens (2017) emphasize that although technology has become an indispensable component of modern translation practice, students should continue developing independent translation competence instead of depending entirely on AI-generated output. Excessive reliance on AI may gradually reduce learners' confidence in their own linguistic abilities and discourage critical evaluation of translated texts.

The existing literature therefore presents two complementary perspectives. On the one hand, AI tools are widely recognized for improving learning efficiency, supporting terminology selection, and facilitating translation tasks. On the other hand, researchers consistently emphasize that these benefits should be balanced with the development of independent translation competence, critical thinking, and professional decision-making skills. Building on these perspectives, the present study investigates students' perceptions of AI use in translation and explores whether greater reliance on AI is associated with lower self-perceived translation competence.

### **Challenges of AI in Translation**

Despite the growing adoption of Artificial Intelligence (AI) tools in translation education, the literature consistently highlights several challenges that may affect students' learning and translation development. One of the most frequently discussed limitations concerns AI's ability to interpret cultural references, contextual meanings, idiomatic expressions, and pragmatic features of language. Unlike human translators, AI systems often generate linguistically accurate translations that fail to convey the intended cultural or communicative meaning, particularly in texts containing culture-specific expressions or figurative language. Several researchers have emphasized these limitations.

House (2015) and Katan (2014) argue that successful translation extends beyond linguistic equivalence and requires cultural awareness, contextual understanding, and sensitivity to communicative intentions. Likewise, Toral et al. (2018) and Läubli et al. (2020) report that although neural machine translation systems have significantly improved linguistic fluency, they continue to experience difficulties when translating

culturally bound expressions, literary texts, and context-dependent meanings. More recently, Mohammed and Al-Azzawi (2025) reached similar conclusions, emphasizing that human revision remains essential to ensure cultural appropriateness and semantic accuracy. Another major concern identified in previous research is the potential impact of excessive AI reliance on students' cognitive development.

Pym (2013), Kiraly (2000), and Moorkens (2017) argue that translation education should continue to develop learners' analytical thinking, problem-solving abilities, and professional decision-making rather than encouraging passive dependence on automated technologies. Similarly, Luckin (2018) suggests that the educational value of AI depends primarily on how it is incorporated into learning activities. When used critically, AI can support learning; however, excessive dependence may reduce students' opportunities to develop independent translation competence.

Overall, the literature suggests that while AI tools offer substantial educational advantages, they also present pedagogical challenges that cannot be overlooked. Researchers generally agree that AI should complement, rather than replace, human learning and critical thinking. This balanced perspective highlights the importance of understanding students' perceptions of AI use and ensuring that technology is integrated into translation education in ways that promote both technological competence and independent translation skills.

### **AI in Translation Education: Evidence from the Libyan Context**

Although international research has extensively examined the integration of Artificial Intelligence (AI) into translation education, studies conducted within the Libyan context remain relatively limited. Nevertheless, recent publications indicate a growing academic interest in exploring the pedagogical implications of AI in language learning and translation. This emerging body of research provides valuable insights into how AI technologies are influencing translation teaching and learning in Libyan universities. Among the recent contributions, Salem (2026) examined the transformation of translation and translation teaching in the era of Artificial Intelligence within the university context. The study emphasized that AI technologies have significantly reshaped translation pedagogy by changing both teaching practices and students' learning experiences. Similarly, Elthelb and Belhaj (2026) investigated the transition from

traditional machine translation to generative AI in website localization, highlighting the growing capabilities of generative AI systems while emphasizing the continued importance of human intervention in ensuring translation quality and cultural appropriateness. Although these studies contribute to understanding the role of AI in translation education, they primarily focus on pedagogical developments and technological applications rather than students' perceptions of AI use. Moreover, limited empirical evidence is available regarding how Libyan university students perceive AI tools, the extent to which they rely on them during translation tasks, and how such reliance relates to their self-perceived translation competence.

Therefore, the present study seeks to address this gap by investigating students' perceptions of using AI tools in translation within the Libyan higher education context. By doing so, it contributes to the growing national literature on AI-assisted translation and provides evidence that may support educators in developing balanced and pedagogically sound approaches to AI integration in translation education.

## **Methodology**

### **Research design**

This study adopted a quantitative research design to investigate students' perceptions of using AI tools in translation. Data were collected from 50 undergraduate students enrolled in the English department at Tripoli University through using a structured questionnaire. The questionnaire examined students' demographic characteristics, patterns of AI use, dependency on AI, and self-perceived translation without the use of AI. The questionnaire was adopted from (Belhassen & Hamda, 2023). Descriptive statistics including frequencies, percentages, means and standard deviations employed to summarize the findings from the SPSS (Version 26.0) software analysis. Furthermore, Pearson's correlation analysis was conducted to examine the relationships among the study variables.

### **Participants**

The participants of this study were undergraduate students from the

English department at Tripoli University. The sample consisted of 50 students enrolled in translation courses at different academic levels. All participants were studying English as a foreign language and had experience with translation practices. Their participation enabled the study to explore their perceptions, experiences, and reliance on AI tools in translation learning.

### **Research Instrument**

The instrument used for data collection was a structured questionnaire designed to investigate students' perceptions regarding the use of AI tools in translation practice. The questionnaire was distributed across the study sample via Google Forms. It was adopted from previous research on AI use in translation education (Belhassen & Hamda, 2023) and it is divided into four sections. The first section collected demographic information including gender, age, and academic level.

The second section focused on students' patterns of AI usage including the types of AI tools used and the purposes of their use. The third section examined students' reliance on AI tools in translation tasks. The final section investigated students' self-perceived translation competence without AI assistance, including their ability to preserve meaning, select appropriate terminology, and produce accurate and fluent translations. The questionnaire items were developed to address the research questions and explore the relationship between AI usage, dependency, and students' perceptions of their translation abilities.

### **Reliability of the Instrument**

The reliability of the questionnaire was measured using Cronbach's Alpha coefficient. This study used the widely used statistical method for evaluating the internal consistency and reliability of questionnaire items and scales, which is the Cronbach's Alpha coefficient. This instrument measured the degree to which items within a questionnaire are correlated and whether they consistently assess the same underlying concept (Tavakol & Dennick, 2011). The reliability analysis was conducted using SPSS, and the obtained Cronbach's Alpha value indicated the level of consistency among the questionnaire items.

## Ethical Considerations

Ethical principles were considered throughout the research process. Participation in this study was voluntary, and participants were informed about the purpose of the research before completing the questionnaire. The participants were assured that their responses would remain confidential and would be used only for academic research purposes. No personal identifying information was collected, and participants had the right to withdraw from participation at any stage.

## Results and Discussion

This chapter presents the findings of the questionnaire conducted to investigate students' perceptions of using artificial intelligence tools in translation. The data were collected from 50 participants and analyzed using SPSS. The results are divided into five main sections: (1) descriptive statistics of the sample demographics, (2) AI usage patterns, (3) descriptive analysis of the main study variables, (4) reliability analysis of the questionnaire scales, and (5) correlation analysis examining relationships between AI usage and translation competence. All statistical tests were conducted at a significance level of  $\alpha = 0.05$ .

### Descriptive Statistics

A total of 50 undergraduate students from the department of English at Tripoli University enrolled in translation courses participated in this study. Table 1 presents the demographic characteristics of the sample.

Table 1. Demographic Characteristics of Participants (N = 50)

| Demographic Variable | Category | Frequency (n) | Percentage (%) |
|----------------------|----------|---------------|----------------|
| Gender               | Male     | 8             | 16.0           |
|                      | Female   | 41            | 82.0           |
|                      | Missing  | 1             | 2.0            |

|                       |             |    |      |
|-----------------------|-------------|----|------|
| <b>Age</b>            | 18-20       | 22 | 44.0 |
|                       | 20-22       | 19 | 38.0 |
|                       | 22-24       | 8  | 16.0 |
|                       | +26         | 1  | 2.0  |
| <b>Academic Level</b> | First Year  | 22 | 44.0 |
|                       | Third year  | 19 | 34.0 |
|                       | Fourth year | 11 | 22.0 |

As shown in Table 1, female participants constituted the majority of the sample (82.0%), whereas male participants represented (16.0%), with one missing response (%2.0). The distribution reflects the higher proportion of female students enrolled in English department and translation courses, making the sample representative of the target population. Regarding age, Participants were categorized into different age groups. Most participants were in the 18-20 years (44.0%) age group, followed by 20-22 years (38.0%), 22-24 years (16.0%), and 26+ years (2.0%). These findings indicate that the sample mainly consisted of traditional undergraduate students who are actively engaged in translation courses and are therefore appropriate for examining the use of AI tools in translation learning. Concerning the academic level, the majority of the participants were first-year students (44.0%), followed by third-year students (34.0%) and fourth-year students (22.0%). These demographic characteristics provide an appropriate basis for addressing the study objectives by representing undergraduate students with different academic levels. This diversity strengthens the study by reflecting a range of learning experiences and levels of exposure to translation practice.

**AI Usage Patterns**

Table 2 illustrates the participants patterns of AI tools use in translation tasks, including the types of AI tools used, the frequency of use, and the primary purposes for which these tools are employed.

Table 2. AI Usage Patterns Among Translation Students

| Variable           | Category                 | Frequency (n) | Percentage (%) |
|--------------------|--------------------------|---------------|----------------|
| AI Tools Used      | ChatGPT                  | 26            | 52.0           |
|                    | Gemini                   | 7             | 14.0           |
|                    | ChatGPT & Gemini         | 8             | 16.0           |
|                    | ChatGPT, Gemini & Others | 3             | 6.0            |
|                    |                          | 2             | 4.0            |
|                    | Other (Grammarly, DeepL) | 3             | 6.0            |
|                    | None                     | 1             | 2.0            |
|                    | Missing                  |               |                |
| AI Usage Frequency | Never                    | 2             | 4.0            |
|                    | Rarely                   | 6             | 12.0           |
|                    | Sometimes                | 35            | 70.0           |
|                    | Always                   | 6             | 12.0           |
|                    | Missing                  | 1             | 2.0            |
| Purpose of AI Use  | Vocabulary Search        | 28            | 56.0           |
|                    | Terminology checking     | 13            | 26.0           |
|                    | Grammar correction       | 8             | 16.0           |
|                    | Paraphrasing             | 12            | 24.0           |

|  |                  |   |      |
|--|------------------|---|------|
|  | Full translation | 5 | 10.0 |
|  |                  |   |      |

**Note:** Participants were allowed to select more than one option; therefore, percentages exceed %100

The findings indicate that ChatGPT was the most commonly used AI tool 52.0% of the participants reporting that they primarily relied on it, and 22.0% of the students reported using it in combination with other AI tools such as Gemini, while only a small proportion relied exclusively on other platforms or reported not using AI tools. These findings directly address the first objective of the study by identifying students' patterns of AI tool use in translation and highlighting the tools they rely on most frequently. These findings suggest that ChatGPT has become one of the most widely used AI tools in educational settings, especially in language-related fields. This result is consistent with recent studies, which reported the widespread adoption of ChatGPT in higher education due to its accessibility, interactive feedback, and ability to generate context-sensitive responses (Kasneci et al., 2023; Kohnke et al., 2023). Regarding the frequency of AI use, the majority of participants 70.0% reported using AI tools sometimes, whereas 12.0% indicated that they always used them and another 12.0% reported rare use. Only 4.0% stated that they never used AI tools for translation tasks.

These findings suggest that AI has become a regular component of students' translation practice without completely replacing independent work. The moderate level of AI use may indicate that students perceive these tools as supplementary resources rather than complete substitutes for their own translation competence, a finding that aligns with previous research on AI adoption in higher education (Chan & Hu, 2023; Malik et al., 2023). Concerning the purposes of AI use, vocabulary search was the most frequently reported function 56.0%, followed by terminology checking 26.0%, paraphrasing 24.0%, grammar correction 16.0%, and full-text translation 10.0%. The relatively low percentage of students relying on AI for complete translation suggests that most participants employ AI

selectively to support specific aspects of the translation process rather than delegating the entire task to AI systems. This finding supports the view that AI tools can function as valuable learning aids when used strategically, particularly in lexical and terminological decision-making, while independent cognitive processing remains essential for producing accurate and contextually appropriate translations (Bowker, 2020; Pym, 2013). These findings further address the first objective of the study by identifying the main purposes for which students use AI tools in translation, indicating that AI is primarily employed as a supportive learning resource rather than a substitute for the whole translation.

### **Descriptive Statistics of AI Dependency Variables**

Table 3 presents the descriptive statistics for the AI dependency variables, including students' reliance on AI tools, perceived difficulty in translating without AI, perceptions of AI as a time-saving tool, and trust in AI-generated translations.

Table 3. Descriptive Statistics of AI Dependency Variables

| <b>AI Dependency Variable</b>                                | <b>N</b> | <b>Mean</b> | <b>SD</b> | <b>Interpretation</b>   |
|--------------------------------------------------------------|----------|-------------|-----------|-------------------------|
| <b>AI Reliance</b>                                           | 50       | 2.57        | 0.84      | Moderate dependence     |
| <b>Difficulty without AI</b>                                 | 50       | 2.57        | 0.84      | Moderate use of AI      |
| <b>AI Time-saving</b>                                        | 50       | 3.00        | 0.82      | High Agreement          |
| <b>Trusting AI translation over students own translation</b> | 50       | 2.18        | 0.83      | Moderate -low agreement |

**Note:** AI dependency variables were measured on a 4-point scale (1 = Never, 4 = Always).

These findings address the second objective of the study by examining students' perceived dependency on AI tools and revealed that participants reported a moderate level of AI reliance ( $M = 2.57$ ,  $SD = 0.84$ ). A similar mean score was obtained for the perceived difficulty of translating without AI ( $M = 2.57$ ,  $SD = 0.84$ ), suggesting that although students do not rely completely on AI tools, many experience some degree of difficulty when completing translation tasks independently. In contrast, the highest mean score was recorded for the perception that AI saves time ( $M = 3.00$ ,  $SD = 0.82$ ), indicating a relatively high level of agreement regarding the efficiency of AI tools. Trust in AI-generated translations received the lowest mean score ( $M = 2.18$ ,  $SD = 0.83$ ), reflecting only moderate to low agreement. These findings suggest that despite relying on AI to varying degrees, students remain cautious about accepting AI-generated translations without critical evaluation. This result implies that students continue to value their own judgment and recognize the limitations of AI in producing accurate and contextually appropriate translations. Such findings are consistent with previous research, which emphasizes that AI tools are valuable as supportive resources but should not replace the analytical and decision-making skills required for high-quality translation (Bowker, 2020; Pym, 2013; O'Hagan, 2014).

### Translation Competence Without AI

Table 4 presents the descriptive statistics for students' self-perceived translation competence without the use of AI tools. The questionnaire examined five dimensions of translation competence, namely grammatical accuracy, meaning preservation, terminology selection, fluency, and overall satisfaction with translation quality.

Table 4. Descriptive Statistics of Translation Competence Variables.

| Translation Competence Variables                    | N  | Mean | SD   | Interpretation          |
|-----------------------------------------------------|----|------|------|-------------------------|
| My translation without AI is grammatically accurate | 50 | 3.68 | 0.87 | Moderate high Agreement |

|                                                                     |    |      |      |                  |
|---------------------------------------------------------------------|----|------|------|------------------|
| <b>My translation without AI preserves the original meaning</b>     | 50 | 3.42 | 0.93 | Neutral to Agree |
| <b>I can choose appropriate terminology without AI support</b>      | 50 | 3.38 | 1.05 | Neutral to Agree |
| <b>My translation without AI reads fluently and naturally</b>       | 50 | 3.34 | 1.02 | Neutral to Agree |
| <b>I am satisfied with the quality of my translation without AI</b> | 50 | 3.56 | 1.04 | Agree            |

**Note:** Translation competence variables were measured on a 5-point scale (1 = Strongly Disagree, 5 = Strongly Agree).

The results indicate that participants generally reported positive perceptions of their translation competence without AI assistance. The highest mean score was recorded for grammatical accuracy ( $M = 3.68$ ,  $SD = 0.87$ ), suggesting that most students believed they could produce grammatically acceptable translations independently. Students also expressed satisfaction with the overall quality of their translations ( $M = 3.56$ ,  $SD = 1.04$ ). Moderate levels of agreement were reported for meaning preservation ( $M = 3.42$ ,  $SD = 0.93$ ), terminology selection ( $M = 3.38$ ,  $SD = 1.05$ ), and translation fluency ( $M = 3.34$ ,  $SD = 1.02$ ). These findings address the third objective by exploring students' self-perceived translation competence and suggest that although students have reasonable confidence in their independent translation abilities, they perceive some aspects of translation as more challenging than others.

In particular, the comparatively lower mean scores for terminology selection and translation fluency indicate that lexical choice and producing natural target-language texts remain areas requiring further development. These components of translation competence demand not only linguistic knowledge but also contextual awareness, experience, and critical decision-making, which typically develop through continuous translation

practice (PACTE Group, 2003; Hurtado Albir, 2015). This finding highlights the importance of translation pedagogy that strengthens higher-order translation competencies, particularly those related to meaning transfer, terminology management, and stylistic fluency. Consequently, AI tools should be integrated into translation education as supportive learning resources while preserving opportunities for students to develop independent translation competence through regular practice and critical evaluation.

**Reliability and Correlation Analysis**

To assess the internal consistency of the questionnaire scales, Cronbach's alpha coefficients were calculated for both the AI Dependency scale (4 items: Q9-Q12) and the Translation Competence scale (5 items: Q13-Q17). A value of 0.70 or above is generally considered acceptable for research purposes (Nunnally, 1978)

Table 5. Reliability Analysis Results

| Scale                        | Number of items | Cronbach's Alpha | Interpretation |
|------------------------------|-----------------|------------------|----------------|
| AI Dependency Scale          | 4               | 0.78             | Acceptable     |
| Translation Competence Scale | 5               | 0.85             | Good           |

As shown in Table 5, the AI Dependency scale demonstrated acceptable internal consistency ( $\alpha = 0.78$ ), while the translation competence scale demonstrated good internal consistency ( $\alpha = 0.85$ ). Both values exceeded the recommended threshold of  $\alpha \geq 0.70$ , indicating that the questionnaire reliably measured the intended constructs.

A Pearson correlation analysis was conducted to examine the relationships between the study variables. These analyses directly address the fourth objective of the study by examining the relationship between AI use, AI

dependency, and students' self-perceived translation competence. The value of  $r$  ranges from -1 to +1, where positive values indicate a positive relationship while negative values indicate a negative relationship and values closer to +1 represent stronger relationship. The statistical significance of each correlation was assessed using the  $p$  value. A correlation is considered statistically significant when  $p < .05$ . The correlation analysis revealed various significant positive relationships among the AI variables. AI usage frequency was significantly positively correlated with AI reliance ( $r = .48, p < .01$ ), difficulty without AI ( $r = .34, p < .05$ ), AI time-saving perception ( $r = .42, p < .01$ ), and trust in AI over own translations ( $r = .39, p < .01$ ). This finding reveals that students who use AI more frequently also tend to rely on it more, find translation more difficult without it, perceive it as time-saving, and trust it more than their own translations.

The strongest correlation among AI variables was between AI reliance and difficulty without AI ( $r = .56, p < .01$ ), suggesting that students who depend on AI tools experience more difficulties when translating on their own. Moreover, AI reliance and trust in AI were strongly correlated ( $r = .52, p < .01$ ), indicating that reliance on AI is closely associated with trusting AI-generated translations over one's own work. The findings of this study reveal a consistent pattern: higher AI usage and dependency among translation students are associated with lower self-perceived translation competence without AI. AI usage frequency and AI dependency variables showed significant positive intercorrelations ( $r = .30$  to  $.56$ ). Most importantly, all AI usage and dependency variables were significantly negatively correlated with translation competence variables ( $r = -.27$  to  $-.49$ ), indicating that higher AI usage is associated with lower self-perceived translation competence without AI.

The significant negative correlations across all AI usage variables and all translation competence dimensions suggest that students who rely more heavily on AI tools tend to have less confidence in their independent translation abilities, particularly in preserving meaning and overall satisfaction with their translations. The absence of significant differences by gender and academic level suggests that these patterns are consistent across demographic groups. The strong reliability of both scales confirms that the questionnaire instruments used in this study are valid and reliable for measuring the intended constructs. These findings have important

implications for translation pedagogy, suggesting that while AI tools offer benefits in terms of time-saving and vocabulary support, their use may be associated with reduced self-confidence in translation competence. However, the results also highlight the importance of maintaining a balance between using AI assistance and developing students' own linguistic competence and critical translation skills. Overall, these findings suggest that AI can enhance translation learning when used as a complementary resource.

## **Conclusion**

This study investigated undergraduate students' perceptions of using artificial intelligence tools in translation by exploring their patterns of AI use, AI dependency, self-perceived translation competence without AI assistance, and the relationships among these variables. The findings revealed that students generally have positive attitudes toward AI tools and recognize their usefulness in supporting the translation process. AI technologies were perceived as helpful resources for improving access to linguistic information, generating possible translation alternatives, and assisting students during translation tasks. However, the results also indicate that students are aware of the limitations associated with excessive reliance on AI tools. Although AI can facilitate translation activities, it cannot replace the translator's role in analysing context, evaluating accuracy, and making appropriate translation decisions.

Therefore, effective use of AI requires a balance between technological assistance and the development of students' linguistic, analytical, and critical thinking skills. The study emphasizes the importance of integrating AI tools into translation education in a guided and responsible manner. Translation instructors should provide students with appropriate training on how to evaluate AI-generated outputs and use these tools as supportive resources rather than substitutes for their own competence. Future studies may examine AI use among larger groups of translation students and investigate its long-term influence on translation learning and professional development.

## **Limitations of the Study**

This study has some limitations that should be considered when interpreting the findings. The first limitation is that the study relied on self-

reported data collected through a questionnaire; therefore, participants' responses may reflect their perceptions rather than their actual translation performance. The second limitation is that the sample size was limited to 50 undergraduate students from the English department at Tripoli University, which may affect the generalizability of the findings to other institutions. The third limitation is that the study focused on students' use and perceptions of AI tools without conducting a direct comparison between human translations and AI generated translations. Future research could include larger samples and practical translation tasks to provide deeper insights into the actual influence of AI tools on translation quality.

### **Recommendations for Future Research**

- Translation instructors should explicitly teach students how to use AI tools strategically as supportive resources rather than substitutes for their own skills. This involves: Teaching students to use AI for specific, targeted tasks (e.g., vocabulary search, terminology checking) while maintaining their own cognitive engagement in meaning construction and text production.
- Students should be trained to critically evaluate AI generated translations by comparing their own translations and identifying strengths and weaknesses of each. Discussing the limitations of AI tools, including their inability to handle cultural nuances, idiomatic expressions, and creative language use.
- Translation curricula should integrate AI literacy while continuing to develop students' independent translation competence and critical thinking.

## REFERENCES

- Belhassen, S., & Hamda, A.** (2025). Translation students' reliance on and trust in artificial intelligence for successful translation projects: Opportunities, challenges, and implications. *Arab World English Journal for Translation & Literary Studies*, 9(2), 106–119. <https://doi.org/10.24093/awejtls/vol9no2.7>
- Borge, N.** (2016). White paper Artificial intelligence to improve education/learning challenges. *International Journal of Advanced Engineering & Innovative Technology*, 2(6), 10–13. <https://ijaeit.com/Content/Paper/2019211108100001120192111081000001.pdf>
- Bowker, L.** (2019). Machine translation literacy: Academic libraries' role. *Proceedings of the Association for Information Science and Technology*, 56(1), 618–619. <https://doi.org/10.1002/pr2.108>
- Castilho, S., Moorkens, J., Gaspari, F., Sennrich, R., Sosoni, V., Georgakopoulou, P., Lohar, P., Way, A., Miceli Barone, A. V., & Gialama, M.** (2017). A comparative quality evaluation of PBSMT and NMT using professional translators. In S. Kurohashi & P. Fung (Eds.), *Proceedings of Machine Translation Summit XVI: Research Track* (pp. 116–131). <https://aclanthology.org/2017.mtsummit-papers.13/>
- Chan, C. K. Y., & Hu, W.** (2023). Students' voices on generative AI: Perceptions, benefits, and challenges in higher education. *International Journal of Educational Technology in Higher Education*, 20, Article 43. <https://doi.org/10.1186/s41239-023-00411-8>
- Doherty, S.** (2016). The impact of translation technologies on the process and product of translation. *International Journal of Communication*, 10, 947–969. <https://ijoc.org/index.php/ijoc/article/view/3849>
- Doherty, S., & Kenny, D.** (2016). The design and evaluation of a statistical machine translation syllabus for translation students. *The Interpreter and Translator Trainer*, 10(2), 183–202. <https://doi.org/10.1080/1750399X.2016.1198181>
- Ethelb, H., & Belhaj, H.** (2026). From MT to GenAI: Bridging machine translation and generative AI in website localization. *Faculty of Languages Journal*, 1(33), 38–52.

**Forcada, M. L.** (2017). Making sense of neural machine translation. *Translation Spaces*, 6(2), 291–309. <https://doi.org/10.1075/ts.6.2.06for>

**Gaspari, F., Almaghout, H., & Doherty, S.** (2015). A survey of machine translation use among translators: A user's perspective. *Machine Translation*, 29(2), 93–118.

**House, J.** (2015). *Translation quality assessment: Past and present*. Routledge.

**Hurtado Albir, A.** (2015). The acquisition of translation competence: Competences, tasks, and assessment in translator training. *Meta*, 60(2), 256–280. <https://doi.org/10.7202/1032857ar>

**Kasneci, E., Sessler, K., Küchemann, S., Bannert, M., Dementieva, D., Fischer, F., Gasser, U., Groh, G., Günemann, S., Hüllermeier, E., Krusche, S., Kutyniok, G., Michaeli, T., Nerdel, C., Pfeffer, J., Poquet, O., Sailer, M., Schmidt, A., Seidel, T., Stadler, M., Weller, J., Kuhn, J., & Kasneci, G.** (2023). ChatGPT for good? On opportunities and challenges of large language models for education. *Learning and Individual Differences*, 103, 102274. <https://doi.org/10.1016/j.lindif.2023.102274>

**Katan, D.** (2014). *Translating cultures: An introduction for translators, interpreters and mediators*. Routledge.

**Kenny, D.** (2011). *Machine translation for translators*. Routledge.

**Kenny, D.** (Ed.). (2022). *Machine translation for everyone: Empowering users in the age of artificial intelligence*. Language Science Press.

**Kiraly, D. C.** (2000). *A social constructivist approach to translator education: Empowerment from theory to practice*. St. Jerome Publishing.

**Kohnke, L., Moorhouse, B. L., & Zou, D.** (2023). ChatGPT for language teaching and learning. *RELC Journal*, 54(2), 537–550. <https://doi.org/10.1177/00336882231162868>

**Läubli, S., Sennrich, R., & Volk, M.** (2020). The limitations of neural machine translation for literary texts. *Translation and Interpreting Studies*, 15(2), 289–310.

**Luckin, R.** (2018). *Machine learning and human intelligence: The future of education for the 21st century*. UCL Institute of Education Press.

**Malik, A., Khan, M. L., & Hussain, K.** (2023). *How is ChatGPT transforming academia? Examining its impact on teaching, research, assessment, and learning*. SSRN. <https://doi.org/10.2139/ssrn.4413516>

**Mellinger, C. D.** (2018). Re-thinking translation quality: Revision in the digital age. *Target. International Journal of Translation Studies*, 30(2), 310–331.

**Mohammed, M. A., & Al-Azzawi, I. G.** (2025). The impact of culture in translating English idioms into Arabic. *Arab World English Journal for Translation & Literary Studies*, 9(1), 103–118. <https://doi.org/10.24093/awejtls/vol9no1.7>

**Moorkens, J.** (2017). Under pressure: Translation in times of austerity. *Perspectives*, 25(3), 464–477. <https://doi.org/10.1080/0907676X.2017.1285331>

**O'Brien, S.** (2012). Translation as human-computer interaction. *Translation Spaces*, 1(1), 101–122. <https://doi.org/10.1075/ts.1.1.07obr>

**PACTE.** (2003). Building a translation competence model. In F. Alves (Ed.), *Triangulating translation: Perspectives in process-oriented research* (pp. 43–66). John Benjamins Publishing Company. <https://doi.org/10.1075/btl.45.06pac>

**Popović, M.** (2018). The state of neural machine translation: A survey. *Machine Translation*, 32(3), 177–205.

**Pym, A.** (2013). Translation skill-sets in a machine-translation age. *Meta*, 58(3), 487–503.

**Salem, F.** (2026). تحولات الترجمة وتعليمها في عصر الذكاء الاصطناعي: دراسة تحليلية في السياق الجامعي [Transformations of translation and its teaching in the era of artificial intelligence: An analytical study in the university context]. *Faculty of Languages Journal–Tripoli-Libya*, 1(33).

**Toral, A., Castilho, S., Hu, K., & Way, A.** (2018). Attaining the unattainable? Reassessing claims of human parity in neural machine translation. *arXiv*. <https://arxiv.org/abs/1808.10432>

Wu, Y., Schuster, M., Chen, Z., Le, Q. V., Norouzi, M., Macherey, W., Krikun, M., Cao, Y., Gao, Q., Macherey, K., Klingner, J., Shah, A., Johnson, M., Liu, X., Kaiser, Ł., Gouws, S., Kato, Y., Kudo, T., Kazawa, H., Stevens, K., Kurian, G., Patil, N., Wang, W., Young, C., Smith, J., Riesa, J., Rudnick, A., Vinyals, O., Corrado, G., Hughes, M., & Dean, J. (2016). Google's neural machine translation system: Bridging the gap between human and machine translation. *arXiv*. <https://arxiv.org/abs/1609.08144>

Zaretskaya, A., Pérez-Ortiz, J. A., & Pastor, G. (2015). Machine translation in the classroom: A survey of students' attitudes. *Proceedings of MT Summit XV*, 267–278.