

## ChatGPT vs. Human Translators: Can AI Replace Language Experts?

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### Abstrak

Kemajuan pesat kecerdasan buatan (AI) telah memengaruhi praktik penerjemahan bahasa secara signifikan, dengan memperkenalkan alat-alat seperti ChatGPT yang menawarkan solusi penerjemahan yang cepat dan mudah diakses. Tujuan dari penelitian ini adalah untuk mengeksplorasi sejauh mana ChatGPT dapat menggantikan penerjemah manusia, dengan menekankan pada elemen-elemen utama termasuk kelancaran penerjemahan, akurasi, dan kepekaan budaya. Dengan menggunakan metode survei deskriptif, data dikumpulkan dari 37 mahasiswa pendidikan bahasa Inggris melalui kuesioner dikotomis. Temuan tersebut menunjukkan bahwa meskipun ChatGPT umumnya digunakan sebagai alat bantu penerjemahan, alat ini masih gagal dalam melakukan ekspresi idiomatik, nuansa linguistik yang kompleks, dan konten khusus konteks. Responden mengakui kekuatan ChatGPT dalam kelancaran dan kecepatan tata bahasa, tetapi menyoroti keterbatasannya dalam menafsirkan emosi, nada, dan referensi budaya. Di sisi lain, penerjemah manusia masih penting dalam situasi yang menuntut ketepatan semantik dan kesadaran kontekstual. Selain itu, penelitian ini membahas implikasi ChatGPT yang lebih luas pada profesi penerjemahan, termasuk kekhawatiran tentang pemindahan pekerjaan dan potensi kolaborasi manusia dan AI.

**Kata kunci:** *ChatGPT, Terjemahan AI, Penerjemah Manusia*

### Abstract

The rapid advancement of artificial intelligence (AI) has significantly influenced language translation practices, introducing tools such as ChatGPT that offer fast and accessible translation solutions. The purpose of this study is to explore the extent to which ChatGPT can replace human translators, emphasizing on key elements including translation fluency, accuracy and cultural sensitivity. Employing a descriptive survey method, data were collected from 37 English language education students through a dichotomous questionnaire. The findings suggest that while ChatGPT is commonly used as a support translation tool, it still fails in doing idiomatic expressions, complex linguistic nuances and context-specific content. Respondents acknowledged ChatGPT's strength in grammatical fluency and speed, but highlighted its limits in interpreting emotion, tone, and cultural references. Human translators, on the other hand, is still important in situations that demand semantic precision and contextual awareness. Moreover, the study discusses the broader implications of ChatGPT on the translation profession, including concerns about job displacement and the potential for human and AI collaboration.

**Keywords:** *ChatGPT, AI Translation, Human Translators*

### INTRODUCTION

The development of artificial intelligence (AI) has extensively affected diverse fields, including language translation. AI-powered translation tool, such as ChatGPT, Google Translate, and DeepL has become the most used as their acceleration and productivity in processing large number of texts (Gao et al., 2024; Lee, 2023; Tsai, 2019). These tools utilize vast linguistic databases and deep learning models to produce translation immediately which make them essential for individuals and communities searching for fast and economical solutions (Dwivedi et al., 2023). The capabilities of AI translation systems are continuously upgrading that blur the lines between machine and human translation. Moreover, the increasing accuracy of AI-driven

translation tools has sparked discussions regarding their impact on professional translators and the language industry as a whole (Sulubacak et al., 2020; Tian, 2024). AI-powered translation continues to advance, integrating features such as real-time speech translation, multimodal processing, and improved contextual awareness. The students use AI tools to enhance productivity while refining machine-generated outputs for higher quality (Khalifa & Albadawy, 2024). As research in natural language processing (NLP) progresses, future translation systems are expected to offer even greater fluency, personalization, and adaptability across diverse languages and dialects (Sumon et al., 2024).

Despite their growing popularity, AI translation tools still face notable challenges. One of the primary issues is their difficulty in grasping context, cultural nuances, and idiomatic expressions (Abinaya & Vadivu, 2024). While AI models can translate words and sentences based on statistical patterns and learned linguistic structures, they often struggle to convey the deeper meanings and subtleties inherent in human language. As a result, AI-generated translations may lack the naturalness and accuracy that professional human translators can provide. In some cases, errors in translation can lead to misinterpretations, particularly in sensitive contexts such as legal documents, literature, and diplomatic communication (Mirzayev, 2024). AI translation tools also face challenges with linguistic bias, specialized content, and data privacy (Charles, 2024; Mohamed et al., 2024; Soysal, 2023). Trained on vast datasets, they may reinforce stereotypes, favor dominant languages, or misinterpret gender-neutral terms. Additionally, they often struggle with technical fields like medicine and law, where precise terminology is crucial (Naveen & Trojovský, 2024). Data security is another concern, as many tools process text via cloud-based systems, posing risks for sensitive information (Daniel, 2024).

For English language education students in higher education, the growing role of AI translation tools presents both opportunities and challenges. On the one hand, these tools can serve as valuable learning aids, helping students quickly understand texts in different languages, expand their vocabulary, and improve their translation skills (Al-Zahrani, 2024). Zhang et al. (2025) stated that by using AI-powered translation applications, students can analyze machine-generated translations and compare them with human translations to develop a deeper understanding of linguistic nuances, contextual meaning, and cultural references.

However, reliance on AI translation tools also raises concerns about academic integrity and critical language skills (Al-Zahrani, 2024). Overdependence on automated translation may hinder students' ability to develop essential language competencies, such as grammatical accuracy, contextual comprehension, and effective communication in both written and spoken forms. Moreover, students need to be equipped with the ability to critically evaluate AI-generated translations, identifying potential errors and biases that could affect meaning and interpretation (Markauskaite et al., 2022).

Given these challenges, an important question emerges, can AI completely replace human translators? While AI translation tools offer speed and convenience, human translators possess the ability to interpret tone, cultural context, and emotional depth in ways that AI currently cannot fully replicate. This raises the need for further research to compare AI-generated translations with human translations, assessing their strengths and limitations. Understanding these differences will help determine the most effective use of AI in translation while highlighting the areas where human expertise remains indispensable.

Previous research on AI in translation has largely focused on the speed and efficiency of AI-powered tools (Moneus & Sahari, 2024; Shahmerdanova, 2025; Thi Tuyet Hanh, 2024). The studies highlight how AI translation systems can process large amounts of text in seconds, making them highly practical for everyday use. Additionally, some researchers have explored the accuracy of AI translations by comparing them with human translations (Li & Chen, 2019; Moneus & Sahari, 2024; Yuxiu, 2024). However, these studies are often limited in scope, focusing on specific domains such as legal, medical, or technical translation, or examining only a few languages rather than a broader linguistic spectrum.

Despite these contributions, significant gaps remain in the existing research. There is a lack of comprehensive studies that evaluate a specific AI tool such as ChatGPT and human translation quality across multiple aspects, including contextual understanding, accuracy, and cultural

nuances. AI models continue to evolve, but their ability to handle idiomatic expressions, humor, and emotional tone remains inconsistent. Without thorough investigations into these areas, it is difficult to assess whether ChatGPT translation can truly match human-level fluency and meaning equivalence.

Another notable gap is the shortage of research on the long-term impact of ChatGPT translation technology on the human translation. While ChatGPT is becoming more sophisticated, they give impacts on English education students. Understanding these long-term implications is crucial for students, educators, and policymakers as they navigate the evolving landscape of AI-driven language services. Addressing these research gaps will provide a more holistic view of ChatGPT translation's potential and limitations, paving the way for future studies that bridge the divide between machine and human translation.

This study aims to examine the extent to which ChatGPT can replace human translators across various aspects of translation. As ChatGPT continues to improve, it is essential to determine its' capabilities and limitations in handling different types of text. By analyzing how well ChatGPT performs in comparison to human translators, this research will provide insights into whether ChatGPT can serve as a complete substitute or if it remains a complementary tool requiring human oversight.

Another key objective is to compare ChatGPT and human translation outcomes in terms of accuracy, fluency, and cultural sensitivity. While AI models are known for their speed and efficiency, their ability to capture the nuances of language remains questionable. This study will assess whether ChatGPT translations maintain the same level of precision, natural flow, and cultural awareness as human translations. By evaluating these factors, the research will highlight areas where ChatGPT translation excels and where it still falls short.

Finally, this study seeks to assess the broader implications of ChatGPT usage for the translation. As ChatGPT translation tool become more widely adopted, there are concerns about their impact on professional translators and the industry as a whole. This research will explore whether ChatGPT threatens traditional translation jobs or if it creates new opportunities for collaboration between humans and machines. Additionally, it will examine the necessity of human intervention in ChatGPT translation, determining the extent to which human expertise remains essential in refining and improving ChatGPT-generated translations.

## **METHOD**

This study employs a descriptive survey design to explore the comparative effectiveness of ChatGPT and human translators in producing accurate and natural translations. Descriptive survey is a quantitative research method that involves gathering data to describe characteristics, trends, or relationships within a population without manipulating variables (Creswell, 2012). This design was chosen as it enables researchers to collect data on respondents' perceptions, experiences, and evaluations of translations generated by ChatGPT and human translators. The study population consists of undergraduate students enrolled in an English language program.

The sample was selected using a purposive sampling technique, in which participants were selected based on specific criteria relevant to the research, which is being English language students in higher education. The sample comprised 23 female and 14 male participants. Data were collected through an online questionnaire using Google Form distributed to the participants. The questionnaire included items on participants' experiences using ChatGPT for translation, their comparisons of ChatGPT and human translations, as well as the strengths and limitations of each method.

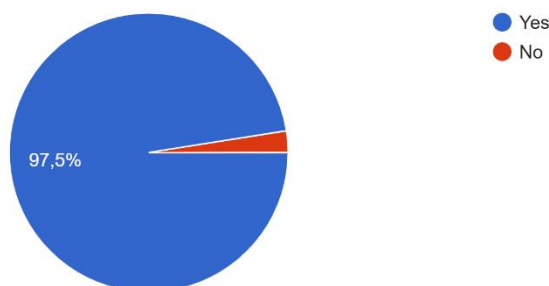
The research instrument was developed based on a comprehensive literature review on translation quality and the application of ChatGPT in translation. The questionnaire employed a Dichotomous Survey which the choices of the response are yes or no. Prior to implementation, the instrument underwent validity and reliability testing. The final version consisted of a 24-item survey questionnaire. Data from the questionnaire were quantitatively analyzed. The findings were then compared with previous studies to derive a more comprehensive conclusion.

## FINDINGS AND DISCUSSION

### Examine the Extent to which ChatGPT can replace human translators across various aspects of Translation

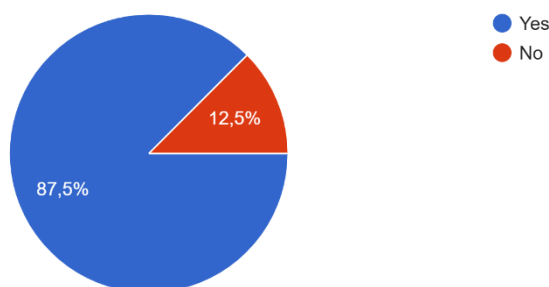
Do you speak more than one language?

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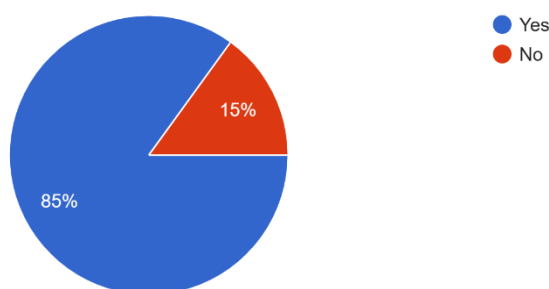
Have you ever studied translation or linguistics?

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Do you often need translation in your daily life or work?

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Preliminary findings from the respondents of five sample suggest that while ChatGPT is known and utilized as a translation tool, its function remains as a supplementary tool rather than substitutive tool. All participants answered using more than one language in their daily lives, and most have formal education in linguistics or translation, lending credibility to their perceptions. Notably, all but one respondent use translation regularly in either their personal or professional contexts, and several have direct experience working as translators. This positions them well to examine critically the advantages and disadvantages of ChatGPT in real-world translation fields.

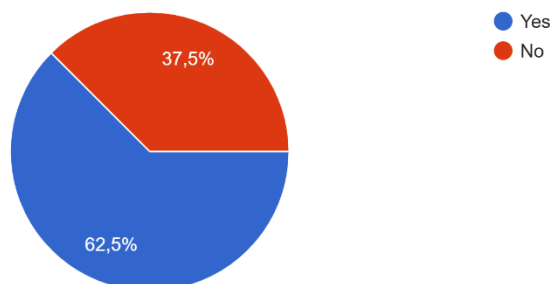
The data shows that although many respondents have experienced with or actively utilized ChatGPT for doing translation, they do not rely on it consistently for all translation tasks. The preference for human translators specifically in areas of requiring precision, such as legal or professional translations emphasizes the perceived disadvantages of ChatGPT in terms of ethical responsibility, contextual understanding, and cultural nuance. ChatGPT is considered acceptable tool, even helpful, for formal or informal translations due to its accessibility and speed. Moreover, for more complex assignments where accountability, accuracy and interpretative skill are required, human translators remain the preferred choice. These inputs suggest that while ChatGPT may support or improve human translation work, it does not mean ChatGPT fully replace human translators across all elements and aspects of translation.

These data were in line with findings from a study that was conducted by Sun, Liu, and Moratto (2024), which investigated the perspectives of professional Chinese translators regarding ChatGPT's abilities. The study showed that while ChatGPT is effective for daily translations, it cannot be done in handling complex texts that need deep cultural and contextual understanding. In addition, a comparative study that was done by Al-Khatib and Elgazzar (2025) examined ChatGPT's performance against human translators in translating Arabic literary texts. The findings revealed that human translators were able to achieve higher accuracy scores (94.5%) compared to ChatGPT (77.9%), although ChatGPT slightly outperformed in fluency (97.2% vs. 96.6%). These findings agreed that while ChatGPT can make fluent translations, it has a limitation in the cultural sensitivity and precision inherent in human translation.

### ***The Comparison between ChatGPT and Human Translator***

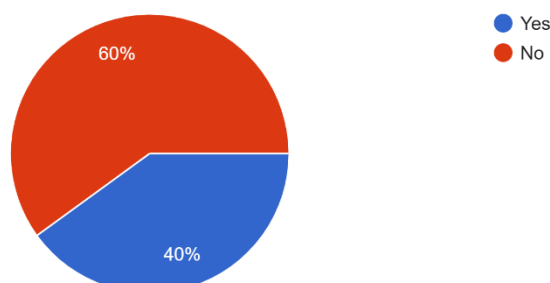
Have you ever used ChatGPT for professional purposes?

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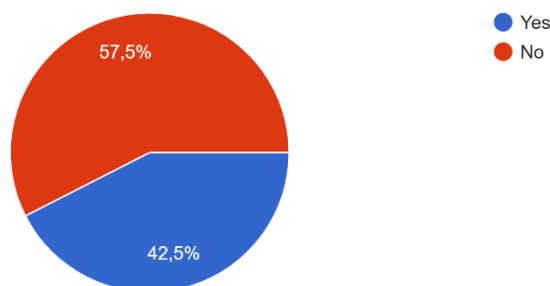
Do you trust Chat GPT for translating important documents?

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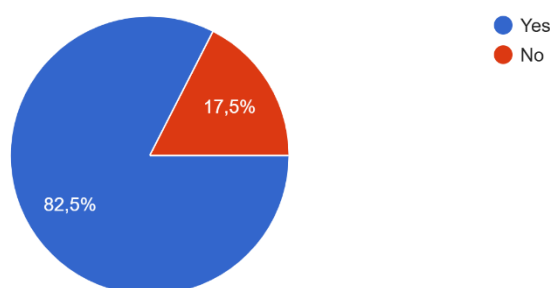
Do you think ChatGPT can fully understand cultural nuances in translation?

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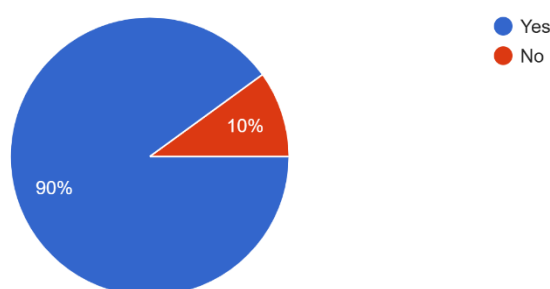
Do you think human translators provide more accurate translation than ChatGPT?

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Would you prefer a human translator over ChatGPT for professional or legal documents?

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When comparing based on the outcomes, the respondents expressed multi views regarding the quality of ChatGPT-generated translations. While many acknowledged the tool's grammatical correctness and fluency, particularly in specific or general texts, there was a consensus that ChatGPT has a limitation with accuracy and cultural sensitivity, particularly when translating idiomatic expressions, culturally bound references, or specialized terms. These shortcomings are critical in high-stakes translation work where nuances can affect legal, social, or emotional interpretation. Human translators, by contrast, are recognized for their contextual judgment, deep cultural awareness, and capability to navigate complex meanings beyond the literal. Some respondents emphasized that ChatGPT occasionally gives translations that are correct technically but off-target semantically or inappropriate contextually. This means that fluency itself does not

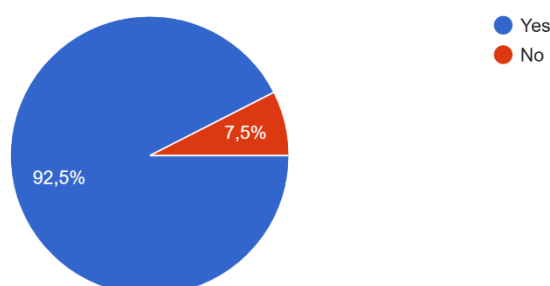
cater to effective cultural appropriateness, effective translation, and semantic precision are equally vital.

That is why, while ChatGPT is able to generate translations that are fluent and readable, its performance in terms of cultural sensitivity and deep contextual understanding still lack comparing to the skills of human translators. These findings reinforce the idea that although ChatGPT can assist in translation works, they are not reliable substitutes yet when higher-level language competencies are needed. It is supported by Zhao (2025) also notes that ChatGPT often miss to capture tone, emotion and cultural relevance, which are important in humanistic and literary texts. The tool may produce surface-level translations that ignore deeper stylistic or semantic nuances.

### ***Assessing the broader implications of ChatGPT utilization for the Translation Settings***

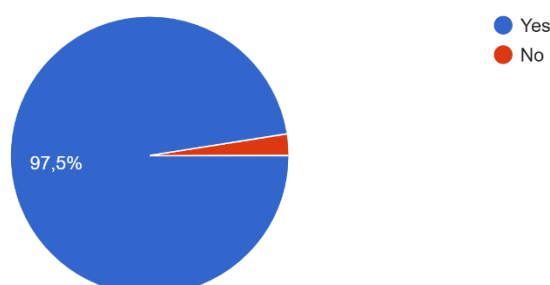
Do you think ChatGPT will improve significantly in the next five years?

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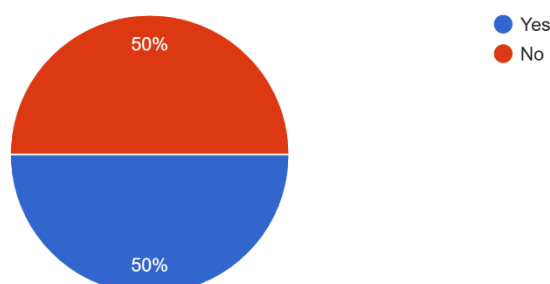
Do you believe ChatGPT and human translators can work together effectively?

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Do you think ChatGPT will ever be as good as human translation?

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The respondents' expectations for the future role of ChatGPT in translation were optimistic cautiously. Most of the participants agreed that ChatGPT and similar AI tools are likely to significantly enhance over the next five years, specifically in terms of linguistic accuracy and contextual relevance. This optimism is balanced by a realistic understanding of the current disadvantages of AI in mimicking cultural intelligence, human cognition, and ethical reasoning.

This is in line with a survey done by the Society of Authors (2024) showed that more than a third of translators have experienced job losses due to generative AI, with over 40% respondents reporting decreased income. Despite these challenges, many believe in the potential for effective collaboration between AI and human translators. There are growing concerns among some respondents about the advantages and potential for AI to replace human translators, leading to fears of job displacement and a devaluation of human expertise. Furthermore, a more dominant theme that emerged was the possibility of collaboration rather than competition. Many participants believe that AI and human translators can support and complement each other, with AI handling routine or repetitive tasks and humans focusing on cultural adaptation, refinement, and critical decision-making. These two approaches may lead to new workflows in the translation fields, need translators to evolve into roles that involve quality assurance, post-editing and AI supervision. However, a study by Nguyen (2024) examined the effect of ChatGPT on the translation profession in Nigeria, emphasizing that while ChatGPT tools present opportunities for efficiency, they also became threats to the relevance and professional status of human translators.

The broader implications, therefore, suggest a shift rather than a substitution. ChatGPT impacts how translation work is approached, prompting professionals to consider workflows, competencies, and ethical considerations. Rather than making human translators obsolete, ChatGPT may redefine their roles and improve the efficiency and accessibility of translation services, especially when responsibly leveraged and in appropriate contexts.

## CONCLUSION

The findings reveal that although ChatGPT is a powerful and accessible tool for translation, it currently functions best as a complementary aid rather than a complete substitute for human translators. Participants, who were English language students with formal linguistic education, acknowledged ChatGPT's strengths in speed, fluency, and grammatical accuracy, particularly for general or non-specialized texts. However, they also emphasized its limitations in handling complex cultural references, idiomatic expressions, emotional tone, and specialized terminology areas where human translators still hold a clear advantage. These limitations are especially critical in high-stakes translation contexts such as legal, literary, or diplomatic work. In conclusion, ChatGPT cannot fully replace human translators due to its current limitations in contextual and cultural understanding. However, it can serve as a valuable tool when used thoughtfully, with human oversight. Future research should continue to examine how AI translation tools evolve and how human-AI collaboration can be optimized in various translation settings.

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This research may still have limitations, but it has been a meaningful learning journey. We hope it contributes to the ongoing discussion on the integration of AI in language translation and inspires further academic exploration in this field.

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