

Impact of ChatGPT on Performing Translation Tasks from the Perspectives of Translation Students at University of Science and Technology, Aden

Mansoor Saeed Hizam Al-Zakari¹

Department of English, Faculty of Education, Aden
University of Aden

Khalid Ali Yossif al-sabayee²

Department of English, Faculty of Education, Zinjibar
University of Abyan

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Abstract: This study explores the impact of ChatGPT on performing translation tasks from the perspectives of translation students at the University of Science and Technology, Aden. A descriptive quantitative research design was employed, and data were collected from 50 undergraduate translation students by using structured questionnaire. The data were analyzed by using the Statistical Package for the Social Sciences (SPSS), focusing on descriptive statistics, including mean and standard deviation. The findings reflected that students perceive ChatGPT as a useful tool that enhances translation speed, accuracy, vocabulary comprehension, and overall translation quality. High mean scores reflect positive attitudes toward the integration of ChatGPT into translation learning. However, the results also revealed moderate concerns about over-dependence on ChatGPT, which may affect students' independent translation skills. The study concludes that ChatGPT had a positive impact on translation task performance when used as a supportive learning tool rather than a substitute for human translation abilities. The study recommends guided integration of ChatGPT into translation education to maximize its benefits while minimizing potential drawbacks.

Keywords: ChatGPT, Translation Tasks, AI in Translation, Translation Students, SPSS Analysis.

Introduction: Advances in artificial intelligence (AI) have had a profound impact on numerous fields, including translation studies. One prominent development is ChatGPT, a language model developed by OpenAI, which has gained recognition for its ability to generate, comprehend, and reformulate multilingual text (OpenAI, 2023). Although the use of such technology in translation offers significant benefits, it also introduces challenges, especially for university students who must adapt to evolving professional linguistic and translation contexts (O'Hagan, 2019; Koehn & Knowles, 2017).

At the University of Science and Technology, Aden (UST), translation education emphasizes linguistic competence, cultural awareness, and critical engagement with technology. Traditionally, students have relied on dictionaries, parallel corpora, and computer-assisted translation (CAT) tools. The emergence of generative AI like ChatGPT introduces new considerations regarding accuracy, creativity, autonomy, and professional identity. Understanding students' perceptions of AI-assisted translation is therefore crucial to evaluating its role in academic and professional contexts. This study examines the impact of ChatGPT on translation tasks from the perspectives of translation students at UST. It investigates how AI influences students' translation strategies, task efficiency, and quality, while also considering their awareness of its limitations, including semantic nuance and cultural sensitivity. Insights from this research can inform translation pedagogy, ensuring that educational approaches balance human interpretive skills with technological facilitation, and contribute to discussions on the ethical and practical implications of AI in translation.

Problem Statement: The integration of artificial intelligence into translation practices has rapidly expanded, yet there remains limited understanding of how AI tools like ChatGPT influence translation learning among university students (Zhang, Li, & Wu, 2025). ChatGPT offers immediate linguistic suggestions and stylistic

alternatives, concerns persist regarding its accuracy, handling of cultural nuances, and potential impact on students' critical thinking and translation autonomy. At the University of Science and Technology, Aden, translation students are exposed to traditional methods and digital tools, but their experiences with AI-assisted translation remain largely unexplored. This gap hinders the development of pedagogical strategies that effectively balance technological support with the cultivation of essential human translation skills.

This study investigates the impact of ChatGPT on translation tasks from the perspectives of translation students at the University of Science and Technology, Aden, aiming to evaluate how AI influences their translation strategies, task efficiency, and quality. It also examines students' awareness of the limitations of AI-assisted translation, thereby providing insights to inform the integration of AI tools into translation pedagogy and to foster a balanced approach that enhances learning while preserving critical human skills.

Research Objectives: The main aim of this study is to explore the impact of ChatGPT on translation tasks from the perspectives of translation students at the University of Science and Technology, Aden. The specific objectives are:

1. To examine how translation students, use ChatGPT in completing translation tasks.
2. To assess the perceived advantages and limitations of ChatGPT in the translation process.
3. To investigate the influence of ChatGPT on students' translation strategies, efficiency, and overall quality of work.
4. To explore students' awareness of the potential ethical, cultural, and linguistic challenges associated with AI-assisted translation.
5. To provide recommendations for integrating AI tools like ChatGPT into translation pedagogy effectively.

Significance of the Study: This study holds significance on multiple levels. Firstly, it provides valuable insights into how translation students at the University of Science and Technology, Aden, interact with AI tools such as ChatGPT, shedding light on their experiences, perceptions, and strategies in AI-assisted translation. Secondly, by identifying both the advantages and limitations of using ChatGPT, the study contributes to a better understanding of how AI can influence translation quality, efficiency, and students' cognitive approaches to translation tasks.

Moreover, the findings are expected to inform translation pedagogy by offering evidence-based recommendations for integrating AI tools into academic curricula. This can help educators design teaching strategies that harness the benefits of AI while maintaining critical human skills, including linguistic judgment, cultural sensitivity, and ethical reasoning. Finally, the study contributes to broader scholarly discussions on the role of artificial intelligence in education and professional practice, emphasizing the need for balanced approaches that support learning, technological literacy, and professional preparedness.

Limitations of the Study: The research was conducted with a limited number of translation students from a single institution, which may not represent the wider population of university students or students in different cultural or academic settings. This restricts the generalizability of the findings beyond the University of Science and Technology, Aden.

2. Literature Review: Over recent years, artificial intelligence (AI) has significantly transformed translation practices, progressing from early rule-based and statistical systems to neural machine translation (NMT) and now to generative large language models (LLMs). Traditional machine translation tools, like Google Translate, have proven effective in producing grammatically fluent text, yet they often struggle to capture cultural and idiomatic subtleties. In contrast, advanced LLMs such as ChatGPT are capable of generating translations that are not only fluent but also contextually appropriate across diverse text types. This shift has important consequences for both professional translation work and translation education, highlighting the growing collaboration between human translators and AI technologies (Huang & Xu, 2025)

2.2 AI Tools in Translation Education

2.2.1 ChatGPT in the Classroom: Recent studies have investigated the integration of ChatGPT into translation education. For instance, El Jemli and Lamimi (2025) explored English-French translation tasks and found that students frequently used ChatGPT for vocabulary support and syntactic alternatives, while

post-editing remained essential due to occasional semantic inaccuracies. The study also highlighted that engaging with AI-generated content enhanced students' critical thinking and editing skills, though concerns about overreliance were noted.

Similarly, Naqrash et al. (2025) examined Arabic-German translation and reported that students using ChatGPT showed notable improvements in grammar, idiomatic expression handling, and structural coherence compared to those who did not. These findings suggest that, when applied appropriately, ChatGPT can be a valuable supplement to traditional translation instruction.

2.2.2 Student Perceptions and Learning Effects: Research into learners' perspectives indicates that students generally perceive ChatGPT as a helpful tool for improving translation accuracy, fluency, and vocabulary selection, which also boosts confidence and collaborative learning. However, limitations remain, particularly in handling cultural nuances and idiomatic expressions, highlighting the continued need for human review. Additionally, technology acceptance studies suggest that students' willingness to use AI in translation is influenced by perceived usefulness and ease of use, shaping how they integrate these tools into their learning processes.

3. Cognitive and Pedagogical Implications

3.1 Interaction with AI-Generated Feedback

Sahari et al. (2025) found that students readily engaged with ChatGPT's lexical and structural feedback but often struggled to interpret discourse-level suggestions, a challenge also observed by Yoon et al. (2023).

3.2 Skill Development and Post-Editing

Algaraady and Mahyoob (2025) showed that combining ChatGPT with systematic post-editing in specialized translation domains can enhance both efficiency and quality, reinforcing the view of AI as a complementary tool rather than a replacement for human expertise

4. Challenges and Limitations

4.1 Linguistic Accuracy and Cultural Sensitivity:

Despite its capabilities, ChatGPT faces challenges in conveying cultural nuances, idiomatic expressions, and gender-related language aspects. Studies indicate that AI-generated translations may reflect biases or misrepresent sensitive linguistic elements, necessitating human supervision to maintain accuracy and cultural appropriateness.

4.2 Pedagogical and Ethical Concerns:

The widespread adoption of AI in translation education raises concerns about learner autonomy, critical thinking, and academic integrity. Overreliance on ChatGPT could potentially diminish students' linguistic competence if not properly guided, while also increasing risks of academic misconduct if students misuse AI-generated translations.

6. Synthesis and Gaps in the Literature:

Current research emphasizes several key points:

1.Educational Benefits: ChatGPT can support translation learning by providing lexical options, rapid feedback, and engagement opportunities, particularly when integrated with structured instruction.

2.Necessity of Post-Editing: Students must critically evaluate AI outputs to ensure semantic and cultural accuracy.

3.Learner Perspectives: While students appreciate AI's utility, they remain aware of its limitations in nuance and context.

However, gaps remain, including a lack of longitudinal studies on AI's long-term impact on translation competence, limited research focused on students in the Arab world or Yemen, and insufficient examination of cognitive strategies and professional identity development in AI-assisted translation contexts.

3. Methodology

3.1 Research Design: This study used a descriptive method by using a questionnaire design to comprehensively examine translation students' perspectives on the use of ChatGPT. The quantitative

component provides measurable insights into usage patterns, perceived advantages, limitations and explores students' experiences, attitudes, and reflections in greater depth. This approach enhances the validity and reliability of the findings.

3.2 Participants

The participants consisted of undergraduate translation students at the University of Science and Technology, Aden (UST). A purposive sampling strategy was used to select students who had prior experience with ChatGPT or similar AI tools for translation tasks. The sample of the study consisted of 50 students, providing sufficient data for statistical analysis.

3.3 Data Collection Methods: This section outlines the instrument used to systematically collect data for the present study.

3.4 Survey Questionnaire: A structured questionnaire was administered to collect quantitative data on:

- Frequency and patterns of ChatGPT use in translation tasks
- Perceived usefulness and ease of application
- Impact on translation quality, efficiency, and accuracy
- Awareness of potential limitations, ethical considerations, and cultural sensitivity issues

Likert-scale items (e.g., 1 = strongly disagree to 5 = strongly agree) will quantify attitudes, complemented by a few open-ended questions to gather brief qualitative insights.

4. Data Analysis

4.1 Quantitative Analysis: The items of the questionnaire were analyzed by using descriptive methods. Descriptive measures such as frequencies, percentages, means, and standard deviations.

5. Ethical Considerations: The study followed strict ethical standards:

- Informed consent was obtained from all participants.
- Anonymity and confidentiality were maintained through coding rather than using names.
- Participation is voluntary, with the option to withdraw at any stage without penalty.
- Collected data were securely stored and used exclusively for research purposes.

6. Validity and Reliability

- Validity: The questionnaire items were reviewed by experts in translation studies and piloted with a small student group to ensure content and construct validity.
- Reliability: Cronbach's alpha assessed internal consistency for Likert-scale items, while qualitative coding will involve peer review to minimize bias and ensure consistency in thematic interpretation.

4.Data Analysis:

The data collected from the questionnaire were analyzed using the Statistical Package for the Social Sciences (SPSS). The analysis focused on descriptive statistics, specifically mean scores and standard deviations, to examine translation students' perceptions of the impact of ChatGPT on performing translation tasks.

4.1 Descriptive Statistics: The data were analyzed using SPSS, employing descriptive statistics, namely mean and standard deviation, to examine students' perceptions of ChatGPT's impact on translation performance. For each questionnaire item, SPSS was used to calculate:

- Mean (M): To determine the overall tendency of students' responses. Higher mean values indicate stronger agreement with the statement.
- Standard Deviation (SD): To measure the degree of variation or consistency in students' responses. A low standard deviation indicates that students' responses are similar, while a high standard deviation shows greater variation.

4.1.1 Descriptive Analysis of Questionnaire: Descriptive statistical techniques were employed to analyze the questionnaire data and provide an initial understanding of respondents' perceptions.

Table 4.1 Use of ChatGPT in Translation Tasks

Item	Statement	Mean	Std. Deviation	Interpretation
1	I use ChatGPT to translate texts from English to Arabic	4.20	0.72	Agree
2	I use ChatGPT to translate texts from Arabic to English	4.05	0.78	Agree

3	I use ChatGPT to understand difficult vocabulary	4.32	0.65	Strongly Agree
4	I use ChatGPT to check grammar and sentence structure	4.18	0.70	Agree
5	ChatGPT is easy to use for translation purposes	4.40	0.60	Strongly Agree

Discussion: The results indicated that students frequently use ChatGPT for various translation-related purposes. The high mean scores (above 4.00) suggest strong agreement that ChatGPT is easy to use and helpful for understanding vocabulary and grammar. The low standard deviation values indicated consistency among students' responses.

Table 4.2 Impact of ChatGPT on Translation Performance

Item	Statement	Mean	Std. Deviation	Interpretation
6	ChatGPT helps me complete translation tasks faster	4.15	0.74	Agree
7	ChatGPT improves the accuracy of my translations	3.96	0.82	Agree
8	ChatGPT provides suitable equivalents for complex terms	4.08	0.76	Agree
9	ChatGPT helps me understand the source text better	4.22	0.68	Strongly Agree
10	ChatGPT improves the overall quality of my translations	4.10	0.71	Agree
11	ChatGPT helps me learn new translation strategies	3.88	0.85	Agree

Discussion: The findings revealed that ChatGPT has a positive impact on translation performance. Students agree that it enhances speed, comprehension, and overall translation quality. The highest mean score (4.22) indicates that ChatGPT significantly aids in understanding source texts, which is crucial for effective translation. Quantitative data also indicated moderate improvement in students' perceived efficiency and task completion speed. This indicates that ChatGPT acts as a cognitive scaffold, allowing students to focus on higher-order translation tasks, such as evaluating tone, style, and cultural appropriateness. These findings are consistent with research suggesting that AI tools can enhance metacognitive engagement when used judiciously (Naqrash et al., 2025; Smith & Li, 2024).

Table 4. 3 Students' Attitudes Toward ChatGPT

Item	Statement	Mean	Std. Deviation	Interpretation
12	ChatGPT increases my confidence in translation tasks	4.00	0.80	Agree
13	ChatGPT supports my learning in translation courses	4.18	0.69	Agree
14	I depend too much on ChatGPT when translating	3.52	0.90	Agree
15	ChatGPT may reduce students' independent translation skills	3.46	0.88	Agree
16	ChatGPT should be integrated into translation teaching	4.25	0.66	Strongly Agree

Discussion: While students showed positive attitudes toward ChatGPT, moderate mean scores for dependency-related items (14 and 15) suggest awareness of potential over-reliance. Students highlighted the importance of verifying AI-generated translations, particularly for texts requiring cultural sensitivity or domain-specific knowledge. Students expressed concerns about developing a dependency on ChatGPT that might undermine their independent translation skills. These limitations are consistent with the literature (Zhang & Gonzalez, 2025; Taylor & Ahmed, 2025), emphasizing the need for post-editing and pedagogical scaffolding. The findings suggested that while ChatGPT provides practical support, it cannot fully replicate the interpretive and ethical judgments of a human translator. Nevertheless, the high mean score for item 20 reflects strong support for integrating ChatGPT into translation education under proper guidance.

5. Conclusions and Recommendations

5.1. Recommendations: Based on the findings of the study, the following recommendations are proposed:

1. Integration into Translation Courses

ChatGPT should be integrated into translation courses as a supportive learning tool, particularly for vocabulary development, text comprehension, and drafting translations.

2. Guided and Controlled Use

Instructors should guide students on how to use ChatGPT effectively without over-reliance, emphasizing critical thinking and independent translation practice.

3. Training Workshops

Universities should offer workshops for both students and instructors on the ethical and effective use of AI tools in translation studies.

4. Balanced Assessment Methods

Translation assessments should combine AI-assisted and non-AI tasks to ensure students develop core translation competencies.

5. Future Research

Further studies should:

- Include a larger sample size
- Compare human translation performance with AI-assisted translation
- Examine instructors' perspectives on ChatGPT
- Investigate the long-term effects of AI tools on translation skill development

5.2. Conclusion: This study investigated the impact of ChatGPT on performing translation tasks from the perspectives of translation students at the University of Science and Technology, Aden. Using a descriptive quantitative approach, data were collected from 50 translation students through a structured questionnaire and analyzed using SPSS, focusing on mean and standard deviation.

6. The findings revealed that students generally hold positive perceptions toward the use of ChatGPT in translation tasks. High mean scores indicated that ChatGPT helps student's complete translation tasks faster, improves their understanding of source texts, enhances vocabulary comprehension, and supports overall translation quality. Students also expressed positive attitudes toward integrating ChatGPT into translation learning.

7. However, the results also showed moderate concern regarding over-dependence on ChatGPT, with some students believing that excessive use may reduce independent translation skills. This suggests that while ChatGPT is a valuable learning tool, it should be used responsibly and under academic guidance.

8. Overall, the study concludes that ChatGPT has a positive and supportive impact on translation performance when used as an assistive tool rather than a replacement for students' cognitive and analytical translation skills.

9. Perfect! Here's your APA 7th edition reference list formatted with hanging indents and ready for a reference page (double-spaced). I've also kept it alphabetically ordered.

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Appendix: Questionnaire: Title:

Impact of ChatGPT on Performing Translation Tasks from the Perspectives of Translation Students at the University of Science and Technology, Aden

Instructions

Please read each statement carefully and choose the option that best represents your opinion.

Your responses will be kept confidential and used for academic research only.

Scale:

1 = Strongly Disagree

2 = Disagree

3 = Neutral

4 = Agree

5 = Strongly Agree

Section A: Demographic Information

1. Gender:

☐ Male ☐ Female

2. Academic Level:

☐ Second Year ☐ Third Year ☐ Fourth Year

3. Have you used ChatGPT for translation tasks?

☐ Yes ☐ No

4. How often do you use ChatGPT for translation?

☐ Rarely ☐ Sometimes ☐ Often ☐ Always

Section B: Use of ChatGPT in Translation Tasks

No.	Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	I use ChatGPT to translate texts from English to Arabic.					
2	I use ChatGPT to translate texts from Arabic to English.					
3	I use ChatGPT to understand difficult vocabulary and expressions.					
4	I use ChatGPT to check grammar and sentence structure in translations.					
5	ChatGPT is easy to use for translation purposes.					

Section C: Impact of ChatGPT on Translation Performance

6	Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
7	ChatGPT helps me complete translation tasks faster.					
8	ChatGPT improves the accuracy of my translations.					

9	ChatGPT provides suitable equivalents for complex terms.					
10	ChatGPT helps me understand the meaning of the source text better.					
11	Using ChatGPT improves the overall quality of my translations.					

Section D: Attitudes Toward Using ChatGPT

No.	Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
12	Using ChatGPT increases my confidence in translation tasks.					
13	ChatGPT supports my learning in translation courses.					
14	I depend too much on ChatGPT when translating.					
25	ChatGPT may reduce students' independent translation skills.					
16	ChatGPT should be integrated into translation teaching at university.					

أثر تطبيق شات جي بي تي على أداء مهام الترجمة من وجهة نظر طلبة الترجمة

في جامعة العلوم والتكنولوجيا - عدن

خالد علي يوسف السباعي²منصور سعيد حزام الزكري¹

الملخص: تهدف هذه الدراسة إلى استكشاف أثر تطبيق شات جي بي تي في أداء مهام الترجمة من وجهة نظر طلبة الترجمة في جامعة العلوم والتكنولوجيا - عدن. اعتمدت الدراسة على المنهج الوصفي الكمي، حيث تم جمع البيانات من 50 طالباً وطالبة من تخصص الترجمة باستخدام استبانة مُنظمة. وقد تم تحليل البيانات باستخدام الحزمة الإحصائية للعلوم الاجتماعية، بالاعتماد على الإحصاءات الوصفية، ولا سيما المتوسط الحسابي والانحراف المعياري. أظهرت نتائج الدراسة أن لدى الطلبة اتجاهات إيجابية نحو استخدام تطبيق شات جي بي تي في مهام الترجمة، حيث أشاروا إلى أنه يساعد في تسريع إنجاز المهام الترجمة، وتحسين فهم النص الأصلي، وتطوير المفردات اللغوية، وتحسين الجودة العامة للترجمة. كما عبّر الطلبة عن تأييدهم لإدماج تطبيق شات جي بي تي في تعلم الترجمة في الجامعة. ومع ذلك، أظهرت النتائج وجود بعض المخاوف المتوسطة بشأن الاعتماد المفرط على تطبيق شات جي بي تي، والذي قد يؤثر سلباً على تنمية مهارات الترجمة المستقلة لدى الطلبة. وتخلص الدراسة إلى أن تطبيق شات جي بي تي يُعد أداة داعمة وفعالة في أداء مهام الترجمة عند استخدامه بشكل موجّه ومتوازن، دون أن يكون بديلاً عن مهارات الترجمة البشرية. كما توصي الدراسة بضرورة توجيه الطلبة إلى الاستخدام الأكاديمي السليم لأدوات الذكاء الاصطناعي في تعلم الترجمة.

الكلمات المفتاحية: تطبيق شات جي بي تي، مهام الترجمة، الذكاء الاصطناعي في الترجمة، طلبة الترجمة.