TRANSFORMING EDUCATION IN THE DIGITAL AGE: HOW TECHNOLOGY AFFECTS TEACHING AND LEARNING TRANSLATION

Dewi Kesuma Nasution[1]

[*1]Universitas Muhammadiyah Sumatera Utara
[*1]*email: dewikesuma@umsu.ac.id*

Abstract: This study examines the growing role of artificial intelligence (AI) in translation education, with a particular focus on ChatGPT and its impact on student preferences and teaching practices. Through case study analysis and interviews, this paper explores how students and educators increasingly rely on AI-based tools such as ChatGPT in translation activities. Findings reveal a rising preference for AI among students, largely due to the tools' efficiency and adaptability in handling complex language contexts. However, both students and educators report ethical concerns, potential over-reliance on AI, and risks of cultural or ideological biases embedded within AI-generated translations. To address these issues, the study recommends a balanced integration of AI into translation curricula. This approach emphasizes using AI tools to improve efficiency and accessibility while fostering essential critical thinking, ethical awareness, and contextual sensitivity. Such a framework ensures that AI technologies complement rather than replace human expertise, strengthening the educational value of translation studies.

Keywords*: Artificial Intelligence (AI), Translation Education, ChatGPT*

Introduction

The teaching and learning of translation have been profoundly influenced by advancements in technology, presenting both new opportunities and challenges. Traditional translation teaching methods are becoming less effective, prompting a shift toward the integration of technology into the classroom (AL-Tamimi, 2018). Many private and public colleges have adopted machine translation (MT) and artificial intelligence (AI) tools as part of their translation training programs. These institutions employ a systematic teaching approach that combines newly developed curricula with computer-assisted technology to prepare translators. However, while these tools enhance self-directed language learning, they often lack mechanisms to foster motivation and interpersonal engagement. According to PACTE (2003), translation competence comprises six sub-competences: psycho-physiological components, instrumental sub-competence, knowledge of translation, extra-linguistic sub-competence, bilingual sub-competence, and strategic sub-competence. For instance, a novice translator who heavily relies on machines to address translation challenges may develop strong instrumental sub-competence. However, this reliance may hinder the development of other critical areas, such as bilingual, extra-linguistic, and strategic sub-competences. Independent translation entails building a solid linguistic foundation, training bilingual transfer skills, and fostering critical thinking and research abilities. Over-dependence on translation machines limits opportunities for reflection,

The teaching and learning of translation have been profoundly influenced by advancements in technology, which has introduced both significant opportunities and

challenges. Consequently, traditional methods of translation instruction are increasingly being supplemented with technological integration within the classroom (AL-Tamimi, 2018). In this context, many private and public colleges have begun incorporating machine translation (MT) and artificial intelligence (AI) tools into their translation training programs. Specifically, a systematic teaching approach, coupled with newly developed curricula and computer-assisted technologies, is now widely utilized to equip translators with the necessary skills. However, while such tools promote advanced self-directed language learning, they often fail to incorporate mechanisms that foster intrinsic motivation and interpersonal interaction.

Based on this phenomenon, this paper seeks to investigate students' perspectives on the use of ChatGPT in their translation class and lecturers' perspectives in the use of ChatGPT in their teaching.

Literature Review

The need for high translation is seen as an opportunity to develop technology that functions to help translate (Nasution, 2022). The emergence of ChatGPT, developed by OpenAI, represents a transformative advancement in AI technology. ChatGPT functions as an intelligent dialogue agent capable of integrating extensive resources, generating synthesized perspectives, and maintaining continuous interaction with users by leveraging a vast database. Due to these capabilities, ChatGPT presents extensive opportunities for educational applications. For instance, previous studies have demonstrated its potential to enhance students' proficiency in various languages (Kohnke et al., 2023) and improve the efficiency of second-language acquisition (Ali Bin Hady et al., 2023). Moreover, ChatGPT's evolution spans from the initial stages of grammatical and syntactic processing of natural language texts to more advanced stages involving logical, semantic, and emotional interpretation. As noted by Hu Jiasheng and Qi Yajuan (2023:4), ChatGPT transcends the mechanical operation of language structures by engaging in the selection and evaluation of language content and ideological essence. With its vast computational power, emerging ideological alignment, and intelligent processing capabilities, ChatGPT is poised to significantly influence foreign language education.

Sahari et al. (2023) argue that ChatGPT significantly reduces the initial time required for translation, thereby enabling human translators to allocate more attention to ensuring accuracy and making improvements. Moreover, ChatGPT often delivers results that are competitive with other machine translation methods. For instance, Hidayati and Nihayah (2024) demonstrated that AI-generated translations tend to be more contextually accurate than those produced by Google Translate, primarily due to the advanced academic writing capabilities and natural language processing of AI. Similarly, Alkhawaja (2024) emphasized that ChatGPT "impressively" outperformed Google Translate in terms of translation quality.

Despite these advantages, the translation potential of ChatGPT may be subject to certain limitations. While it excels in translating brief and straightforward phrases, it frequently encounters difficulties with texts that involve more complex nuances and intricate linguistic patterns. For example, Lau et al. (2024) argue that AI translators, including ChatGPT, lack the ability to grasp the emotions and thoughts conveyed by poets, which limits their effectiveness in translating poetic texts. Additionally, although the translations produced by ChatGPT are generally comprehensible, they often struggle with separable phrasal verbs, as noted by Alosaimi and Alawad (2024).

Furthermore, culturally sensitive messages that require a deep understanding of context-rich data are another area where ChatGPT falls short, according to Banat and Adla (2023).

Sahari et al. (2023) further contend that while ChatGPT is effective in handling mechanical tasks, such as drafting and revising translated texts, it is less adept at tasks that demand critical thinking and fine-tuning. ChatGPT has the ability to revolutionize the way that translation education is taught, giving the intelligent and digital transformation of teaching and translation education tremendous impetus. However, it can also result in the alienation of teaching-subject connections, which presents dangers related to ideology, knowledge security, and ethics (Fan et al., 2023). Regarding curriculum design, educators should enhance students' political literacy, naturally incorporate ideological and political components into the translation teaching process, and reinforce ideological and political education in the curriculum (Fan Daqi & Sun Lin, 2023:87). In addition to strengthening manual inspection and comments on students' post-editing assignments, teachers should take on the role of "video diagnosis" and assist students in developing their capacity to manage ideological dangers.

With the profound integration of AI and self-directed learning, a new era of education has begun (LI, MA, XU, et al., 2023). By generating pertinent content and resources on particular subjects through conversations, ChatGPT can serve as a useful supplemental tool to support EST translation students' learning and establish a safe environment for group learning. In particular, ChatGPT can benefit English scientific and technical translation students in the ways listed below (ZHANG Jia-mei et al., 2023). An unavoidable trend in the progress of educational informatization is the use of artificial intelligence technology in foreign language instruction (Chen Jianlin, 2020, p. 14). By transforming the idea of "promoting knowledge first to ability first, accelerating the reconstruction of all elements of education (data subject environment resources), reshaping the entire space of education (physics information society), integrating the entire process of education (teaching learning management evaluation testing), and reforming the entire evaluation of education (results process value-added comprehensive), ChatGPT contributes to the comprehensive upgrading and efficiency improvement of the intelligent education application ecosystem and, ultimately, accelerates the evolution of the education system" (Xia Lixin, 2023, p. 11).

Previous studies (Jiao et al., 2023; Hendy et al., 2023) on translation tasks have found that ChatGPT performs competitively with commercial translation products (e.g., Google Translate and Microsoft Translator) on high-resource languages, but has limited capabilities for low-resource and distant languages. However, they only adopt simple prompts and basic settings regardless of the significant influence of the prompts' quality (Zhou et al., 2022), which may limit ChatGPT's performance.

Method

This study employed a qualitative research design to explore the integration of AI tools, specifically ChatGPT, into translation education within the English Education Department of Universitas Muhammadiyah Sumatera Utara. The research focused on understanding students' and lecturers' perceptions, experiences, and practices regarding the use of ChatGPT in translation tasks.

Data Collection Methods

Data collection for this study involved two primary methods: case studies, semi-structured interviews. The participants included 20 undergraduate students enrolled in translation courses and two lecturers who teach translation courses. The case studies observed students as they engaged with both ChatGPT and traditional translation methods, focusing on their interaction with the AI, problem-solving strategies, and overall performance. Semi-structured interviews with students explored their preferences, perceived

benefits such as efficiency and adaptability, and concerns related to over-reliance on AI or ethical issues. Similarly, interviews with lecturers investigated their experiences with integrating AI tools, teaching strategies, and perceptions of how AI impacted students' translation competencies.

Data Analysis Methods

The data collected from interviews were analyzed using thematic analysis. This method involved identifying patterns and themes in participants' experiences and opinions to draw meaningful conclusions. The analysis focused on three key areas: students' preferences and efficiency when using AI tools and the ethical and pedagogical challenges associated with AI integration. These themes provided insights into the benefits and limitations of ChatGPT in translation education. The analysis aimed to ensure that findings informed recommendations for a balanced translation curriculum that integrated AI tools effectively, emphasizing both technological efficiency and the development of critical thinking, ethical awareness, and contextual sensitivity.

Results and Discussion

Students' Perspectives on ChatGPT in Translation Class

Due in large part to the significant advantages these tools provide in terms of effectiveness, individualized learning, and accessibility, the results demonstrate that students strongly favor AI technology, such as ChatGPT when it comes to translation jobs. The ability of AI technologies to save time was one of the primary factors that led students to embrace them. Many students said that using AI technologies helped them finish translation assignments faster, especially when dealing with big amounts of text. Instead of spending a lot of time on the first translation draft, students were able to concentrate more on polishing their work because they could produce preliminary translations very instantaneously. In academic environments, where students frequently have time limits and must meet deadlines promptly, this efficiency was especially valued.

Furthermore, the user-friendly interface of AI technologies was especially valued since it lessened the intimidating nature of translation tasks. Pupils reported that ChatGPT and similar applications were simple to use and offered precise translation recommendations for difficult or specialist terms. For less experienced students, who were still honing their translation abilities and frequently doubted their capacity to effectively translate difficult words or technical terms, this was quite helpful. In these situations, AI offered prompt assistance by recommending contextually relevant substitutes, enabling students to get past obstacles and proceed with their task with greater assurance.

Students also valued the customized learning experience that AI tools offered. Numerous students discovered that ChatGPT systems could adjust to various text kinds, including literary and academic works, and provide translations that were tailored to the particular requirements of each assignment. Students were able to interact with a wider variety of content and hone their translation abilities in a variety of domains thanks to this adaptability in managing multiple text genres. Students were able to expand their translation skills and try out different translation strategies thanks to AI tools' capacity to meet a variety of linguistic and contextual needs.

Students also appreciated ChatGPT technologies' capacity to assist with difficult translation problems, like idiomatic expressions, syntactical structures, and specialist terminology. For instance, ChatGPT and other AI technologies could provide instant recommendations for technical translations or domain-specific jargon, which would otherwise necessitate a great deal of research. Because it enabled them to translate more

accurately and precisely without being hampered by language hurdles, students found this to be especially useful when translating in fields where they were less familiar with the terminology.

Students did, however, recognize the limitations of AI in translation, even though they strongly preferred utilizing AI technologies. Although ChatGPT was viewed as a useful tool for producing fast drafts or making recommendations, students understood that AI could not take the place of the critical thinking and sophisticated judgment needed for professional translation. Students acknowledged, for instance, that because ChatGPT lacked the human ability to comprehend cultural contexts or emotional nuances, it might find it difficult to translate idiomatic idioms or culturally sensitive content effectively. Many students said that rather of using AI as their ultimate translation solution, they used it more for its earliest drafts or as an additional tool. In these situations, students would modify the translation through more in-depth critical examination, making sure that it was both culturally and contextually appropriate.

In conclusion, students preferred ChatGPT because of their effectiveness, usability, and capacity to manage challenging assignments. But they also acknowledged AI's shortcomings, especially with regard to cultural sensitivity and the requirement for human judgment. In the end, students saw AI as a helpful tool that helped speed up the translation process, but they emphasized the need to strike a balance between utilizing AI and honing critical thinking and autonomous work skills to enhance fundamental translation abilities.

Impacts on Teaching Practices

The integration of AI into translation education has introduced significant challenges and ethical concerns, which impact teaching practices in various ways. One of the primary concerns is the potential for students to become overly dependent on AI technologies. This reliance, in turn, may result in the erosion of critical language comprehension and translation skills that are essential for professional work in the field. Moreover, AI systems, which are trained on extensive datasets, have the capacity to reproduce cultural or ideological biases inherent in their training data, thus leading to translations that inadvertently reflect regional or gender stereotypes. Consequently, these issues raise concerns about the objectivity and reliability of AI systems within educational settings.

In addition to these challenges, the integration of AI into curricula also presents pedagogical issues for instructors. One major difficulty is finding a balance between harnessing the advantages of AI and encouraging students' independence. This is further complicated by the absence of clear guidelines on the ethical use of AI in education, which exacerbates the challenge of promoting responsible use among students. Thus, these complexities underscore the need for nuanced approaches to integrating AI into translation instruction, while also addressing its inherent limitations.

Lecturers reported mixed experiences when incorporating ChatGPT into their teaching practices. On one hand, they recognized the potential benefits of using AI tools, particularly in enhancing the effectiveness of translation assignments and providing students with real-time feedback. Many lecturers noted that the use of AI in translation tasks led to increased student engagement, as it personalized and made the learning process more interactive. On the other hand, instructors expressed concerns regarding students' over-reliance on AI technologies. They argued that excessive dependence on AI could hinder the development of essential skills, such as autonomous decision-making in translation, contextual analysis, and critical thinking. Consequently, instructors emphasized the importance of using AI in a balanced manner, leveraging its capabilities to complement traditional methods of teaching rather than replacing them.

Conclusion

The study underscores the transformative potential of AI in translation education. Tools like ChatGPT can significantly enhance learning by improving efficiency and accessibility. However, their integration into translation studies must be carefully managed to avoid over-reliance, address ethical concerns, and maintain the primacy of human expertise. A balanced approach leveraging AI as a complementary resource while emphasizing critical thinking, ethical awareness, and cultural sensitivity can ensure that AI enriches rather than undermines the educational value of translation training. By fostering this synergy between technology and human skills, translation education can evolve to meet the demands of a rapidly changing linguistic landscape.

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