Teachers' and Students' Perspectives on AI Application in Translation Studies: A Leap or a Challenge?

Nguyen Thi Minh Hanh[1*], Bui Thi Thu Giang[1], Cao Thi Hai Hang[1]

[1] School of Languages and Tourism, Hanoi University of Industry, Vietnam
[*] Corresponding author's email: nguyenthiminhhanh@haui.edu.vn
[*] https://orcid.org/0000-0003-2332-5732

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ABSTRACT

This paper investigates the perspectives of both teachers and students on the benefits and challenges of integrating artificial intelligence (AI) into translation studies at a public university in Southeast Asia. The study surveyed 68 final-year undergraduate students majoring in business and tourism translation via an online, structured questionnaire in Google Forms and conducted a focus group discussion with all five translation lecturers. The findings reveal that most research participants believe that integrating AI has enhanced students' translation speed, accuracy, and overall translation outcomes. Students also improved their translation process thanks to AI analyses of differences among AI-generated translations and feedback from AI tools. However, the naturalness of AI-generated translations, including the inability to grasp culturally specific content, idiomatic expressions, colloquial language, and nuanced meanings, particularly the risk of students' overreliance on AI, are still the existing concerns mentioned in research findings. The impacts of AI applications on translation studies and the pedagogical implications of emphasizing the role of human translators in the AI era will then be discussed and proposed accordingly for translation students, teachers, and curriculum designers.

Keywords: Artificial intelligence (AI), benefits, challenges, perspectives, translation

Introduction

Nowadays, the rapid advancement of science and technology, together with the unprecedented growth of AI, has exerted profound influences on almost every aspect of life, ranging from the way people search for information, communicate, study, and work, and the field of translation has naturally been part of this trend (Aldosari, 2024; Alsager, 2024; Dai, 2024; Moneus & Sahari, 2024; Pack, 2023; Zamanpour & Etemadzadeh, 2024). Since 2017, the emergence of Neural Machine Translation (NMT) has been an important turning point, as neural models based on transformer architectures have produced translations of remarkable accuracy and speed, particularly in general and technical texts. However, since the end of 2022, the advent of large language models (LLMs) such as ChatGPT has marked a new stage for the translation

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industry. These models not only provide translations but also handle broader contextual information. In several cases, they can even produce creative translations that are comparable to those made by novice human translators.

In this context, AI technologies have brought many changes to the translation industry. These changes are evident in the labour market and create a need for university translation programmes to adjust how they train students. Many curricula have shifted from focusing on traditional manual translation skills to emphasising the ability to evaluate, critique, and post-edit AI-generated translations (Naveen & Trojovský, 2024; Ozmat & Akkoyunlu, 2024; Sahari et al., 2023; Son & Kim, 2023). The use of AI not only helps save time but also provides students with immediate feedback, which is particularly valuable in academic programmes that must manage time and workload constraints (Zhang et al., 2025). Despite these outstanding advantages, the application of AI in translation still presents certain challenges, as both NMT and LLMs continue to produce errors in several core aspects of high-quality translation, such as hallucinations, inconsistency in specialised terminology, misinterpretation of cultural nuances and pragmatic meaning, or limited creativity when dealing with literary texts (Naveen & Trojovský, 2024; Xu et al., 2024).

From 2023 to the present, a growing number of studies have examined the use of AI in language education; however, these studies tend to focus on the general impact of AI on teaching and learning rather than directly investigating the perspectives of both instructors and students regarding AI applications in translation training (Gladkoff et al., 2024; Zhang et al., 2025). For this reason, the present study aims to address this gap by exploring the views of instructors and students on the use of AI in translation training, with particular attention to whether their perceptions differ when working with NMT and LLM systems, thereby assessing whether AI should be considered "a remarkable leap forward" or "a significant challenge" for current approaches to translator education.

Research Questions

This study focuses on answering two main research questions:

1. What are teachers' and students' perceived benefits of AI in translation studies?
2. What are teachers' and students' perceived disadvantages of AI in translation studies?

Literature review

AI Technologies in Translation: NMT and LLMs

NMT and LLMs are often mentioned as important AI technologies in the translation field today. NMT *uses* deep neural networks and large bilingual datasets for training. With this type of data, the system learns to translate whole sentences or short stretches of text. It does not translate word by word like older systems. *As a result*, the output is usually clear enough, and the grammar is not too problematic. Many tools people use every day, *such as* Google Translate, are built on this technology (Ashraf, 2024; Roussis, 2024).

LLMs also use the transformer architecture, but the*ir training* is quite different. They use very large monolingual datasets from many places—books, newspapers, online materials, and so on. They do not rely on bilingual pairs like NMT. What they learn mainly comes from plain text, and through this learning, they gradually pick up how words and sentences relate to each other in context. This allows them to produce text that sounds natural. They can also *perform* other tasks, *such as* summarizing or creating new content (Chen, 2024; Marashian et al., 2024).

The two models are trained *differently*, so their performance is also *different*. NMT is generally fast and works reasonably well when the language pair is common or the text is quite straightforward. In other situations, especially with long or idiomatic sentences, NMT often *struggles* to *provide* a clear translation, and the result may miss part of the intended meaning (Sokova & Toledo-Báez, 2024; Ashraf, 2024). LLMs tend to *handle* these sentences more comfortably because they have been trained *across* a wide range of contexts. Even so, they require *substantial* computing resources, and *at* times the information they generate is *incorrect*. This becomes a real concern for specialised translation, where accuracy is very important (Xu et al., 2024).

Manual Translation and Its Role in Modern Translation

Despite all the developments in AI, human translation still plays a crucial role in current operations, especially for complex texts that require creative interpretation and a deep understanding of cultural context. Human translators are supreme when it comes to tasks that involve interpreting a text's content, context, and cultural implications, and AI, however powerful and advanced, will never match them. Even though AI can generate linguistically correct translations, it can usually fail at idiomatic meanings, humor, and culturally sensitive content, so the worry is that, unchecked, it would produce embarrassing or inaccurate translations (Ashraf, 2024). According to the research conducted by Moneus and Sahari (2024) on the translation of legal texts, results from AI-assisted translation differ significantly from those obtained with human translators, especially when complex legal terms are involved and when dealing with implicit meanings. Their findings reveal that, even in specialized domains, the most advanced AI models cannot produce translations as accurate in context and pragmatics as human translations. Human translators still need to intervene to correct mistakes, maintain consistency in terminology, and adjust the tone to fit the target text. This again shows how important the post-editing stage is when it is done by human translators. In fields that require a high level of creativity, such as literature or marketing, AI is still unable to replace professional translators in recreating the artistic and emotional elements that belong to the original text in a very human way (Castaldo et al., 2025). The study by Gladkoff et al. (2024) also confirms that post-editing by professional translators is an essential part of producing a premium-quality translation. Their research suggests that MT output should be used only as a draft for human translators, who then review and revise it to address common MT problems, such as hallucinations, inaccurate terminology, and factual inaccuracies.

Another issue that has received attention is the concern about quality and ethics when relying on AI without human checking or revision. Suppose AI is used to translate documents that require extremely high accuracy, such as legal, medical, or political texts. In that case, it may cause serious risks, including wrong information or confusion. AI-generated texts, especially those produced by LLMs, may also contain biased expressions, since these models learn from training data that already include many kinds of bias (Chen, 2024). This further highlights the role of human translators in monitoring, shaping, and adjusting the final output produced by AI systems.

Recent Developments in AI and Its Impact on Translation Education

The rapid expansion of AI technology has noticeably changed the way translation is taught and learned in universities. In many classes now, it is easy to see that teachers no longer ask students to translate everything from the beginning. They often let students work with an AI-generated draft first. Many students prefer this approach because it saves time and gives them a starting point. In the past, they had to spend a long time looking up words or translating each line, but now they can move to the editing stage much earlier. When they review the draft generated by

AI, students notice parts that do not match the context or tone and adjust them to make the text sound more natural (Zhang et al., 2025).

This change naturally affects the classroom atmosphere. Lessons are no longer centered on each student's individual translation. Students often sit together to compare different ways of translating a sentence and talk about which option feels more suitable. These discussions make the class feel more active, and the back-and-forth exchange allows students to express themselves more freely. Some teachers also mention that they have had to change their methods. Instead of expecting a complete translation from the start, they let students explore the AI draft, compare alternatives, and explain why a certain sentence should be written in a particular way (Sahari et al., 2023).

At the same time, many students share their own concerns. Even though they enjoy using AI and editing the draft, they worry that depending on it too much may weaken their creativity and their sensitivity to language. A few students said they no longer have much space to phrase ideas in their own words because AI already shapes their thinking from the beginning. Some also admit that they find it difficult to analyse a translation properly; several mentioned that they "cannot tell any detailed problems in the translated texts," even when they feel something is not right. Over time, this may quietly reduce their ability to analyse a text, and they may not recognise when this happens (Zhang et al., 2025).

When we look at the situation more broadly, AI does not influence all learners in the same way. Sometimes it helps them save time and focus more on meaning. But in other cases, too much dependence on it can make them less responsive to language. The key point lies in how the tool is used. AI can generate translations quickly, but it cannot replace the work learners must do themselves—reading, understanding, and thinking.

Methods

This section features the explanatory sequential mixed-methods approach used in the research. The combination of self-reported data collected through a survey questionnaire with students and qualitative data from a focus group discussion with teachers helps clarify the application of AI and its impacts on translation studies.

Participants

The surveyed participants were selected based on their enrollment in translation courses and their willingness to participate in the study, and consisted of 68 fourth-year students (8 males and 60 females) *aged* 20-21. Students' English proficiency level is equivalent to high B2, and they were all studying in a translation course, the second in a series of three translation *courses*, focusing on practicing translating documents *from* English *to* Vietnamese in the business and tourism sectors. The research took place at a public university in Southeast Asia, which offered blended-learning translation programs comprising 100-minute face-to-face lessons and one or two online sessions *per week* during each semester of 15 weeks. Enrolling in these blended translation courses, students were allowed to use AI tools during translation practice under *their teacher's* guidance and support. All five teachers in these translation classes were female, ranged *in age* from 30 to 47, and *had* master's degrees and 5-22 years of teaching *experience, including* extensive experience in translation education.

During class sessions, students were asked to work in groups of four or five and join *whole-class* discussions to *share* their comments and feedback, as well as their own *evaluations of* the quality of AI-generated translation versions. This collaborative process was *conducted* under

the class teacher's guidance and control to *determine* the most appropriate translation *into* the target language, either English or Vietnamese. The checklist of five criteria was suggested by the translation teachers and given to all students at the beginning of the course, including the criteria of accuracy, naturalness, terminology and lexical choice, register, and cultural and contextual appropriateness. Thus, all the teachers and students were well-perceived of how and what to assess in each AI-generated translation.

Regarding students' experience *with* AI-supported tools for translation practice, approximately three-fourths of students *reported* their translation proficiency was at the intermediate level. In addition, regarding their frequency of using AI tools *to complete* translation assignments, surveyed participants underscore the prevalence of AI in their studies and *reported using* AI tools as always, often, and sometimes, with 20.6%, 44.1%, and 32.4%, respectively. However, about one-third (21 students) admitted that they used NMT tools such as Ejoy, Ilovetranslation, and Google Translate frequently for translating texts. Meanwhile, LLM systems, including Claude AI, Google Gemini, Poe, and ChatGPT, were mentioned by the *remaining* participants as the *preferred* AI tools *for* translation. Notably, ChatGPT and Google Translate were the most preferred AI tools among the utilized ones.

Instruments

Data reported in this research *were* collected from two main instruments*:* an online survey *administered via* Google Forms *to* 68 English-major students and a focus group discussion with five translation teachers.

The purpose of the online survey was to collect quantitative data *on* students' *experiences* and perceptions of the applications of AI-supported tools in their translation learning. The questionnaire was adapted from Zhang (2023), which meant it was modified and added some changes to suit the current research setting for undergraduate students focusing on English-Vietnamese translation studies. There were four key sections in the questionnaires, the first *of which* explored students' self-reported translation proficiency, their frequency of using AI tools in translation, and the types of AI tools they often used to support their translation studies. The second section of the survey covered ten questions using the 5-point Likert scale (from 1 = strongly disagree to 5 = strongly agree), which investigated students' opinions on the how AI tools supported their translation learning in terms of translation accuracy, efficiency, and the development of translation skills. The next ten questions in section three helped *clarify the* challenges students *faced* in AI-generated translation, particularly fluency, contextual accuracy, and whether students relied on AI in their translation studies. The last section, including open-ended questions, gave students the *space* to share their own ideas *about* the use of AI and *to* propose suggestions for better integrating AI tools *into* translation practice and training.

An approximately *60-minute* focus group discussion with all five translation teachers was also *conducted* in this research to explore and clarify students' advantages and disadvantages of AI-supported tools in translation studies. The first section of the discussion was *used* to elicit the perceived benefits of AI software in enhancing translation speed, accuracy, and word choice, as well as the translation techniques taught during the course and applied alongside AI-powered tools by students. Translation teachers involved in the discussion also *discussed* the challenges students face when using smart tools, including the naturalness and fluency of AI-generated translations, the risks of students' overreliance on AI platforms, and the lack of critical thinking *when* selecting appropriate translations. Teachers then proposed suggestions for both supporting students in effectively engaging with AI tools in translation practice and *for* optimizing the use of machine learning tools*, such as* AI *tools,* in translation courses.

Data collected from the discussion were kept confidential and used *only for* research *purposes*; therefore, the codes T#1 to T#5 were used for each teacher when the focus group discussion data were presented in the study.

Data Analysis Procedures

Both quantitative data from an online survey of students and qualitative data from a teachers' focus group discussion were handled separately and then combined using a mixed-methods approach in this study. First, students' responses from the quantitative data were screened for completeness; then the cleaned survey data were analyzed with SPSS version 26. The Cronbach's Alpha coefficient was at 0.792 (>0.6), while the KMO value was 0.721 (>0.5), and the p-value was significant (p<0.001). The results of the reliability test, the KMO and Bartlett's test, and the Bartlett's Test of Sphericity confirm that the questionnaire used in the research was valid and reliable. Meanwhile, the transcripts of the focus group discussions with teachers were coded into themes. Focus group discussion data were analyzed by two independent coders, both with MA degrees in TESOL and over a decade of experience in translation teaching. Prior to the coding process, they collaborated to develop a framework that would serve as criteria for analyzing themes in data collected from the teachers' focus group discussion. Any discrepancies between the two coders were discussed and resolved to ensure full agreement before the coding process. The value of Cohen's Kappa was used to assess the interrater reliability, in which the Kappa value of 0.730 ($p < .001$) indicates a substantial level of agreement between the two coders.

Findings

Benefits of AI Integration into Translation Studies.

The following section presents the positive aspects of AI integration in translation studies identified through the student survey and the teacher focus group discussion.

Students' Perspectives

The student survey results are reported separately for those who frequently used NMT (hereafter NMT students) and those who opted for LLM as the main tool for their translations (hereafter LLM students) as follows.

Table 1.

NMT students' perspectives on the benefits of AI integration in translation productivity and quality

No	Items	Level of agreement (%) (1: strongly disagree – 5: strongly agree)					Mean	Std. Deviation
		1	2	3	4	5		
1	AI tools help me complete translations faster.	4.8	0.0	23.8	61.9	9.5	3.71	0.84
2	AI tools have improved the accuracy of my translations.	0.0	4.8	9.5	42.9	42.9	4.23	0.83
3	AI tools help me understand complex sentences and terminology.	4.8	9.5	52.4	19.0	14.3	3.28	1.00
4	AI tools assist in maintaining consistency in my translations.	4.8	0.0	28.6	47.6	19.0	3.76	0.94
5	AI tools provide useful suggestions that improve my translation quality.	4.8	4.8	19.0	47.6	23.8	3.80	1.03

Table 1 indicates the advantages of integrating AI into their translation course regarding translation productivity and quality perceived by NMT students. The table shows that 71.4% agreed or strongly agreed that AI tools help them complete translations faster, while only 4.8% strongly disagreed. Regarding accuracy, most participants (85.8%) agreed that AI tools contributed to improved translation accuracy (mean score = 4.23), whereas neutral and disagreeing responses were minimal. In terms of consistency, 66.6% of students agreed or strongly agreed that AI tools help maintain consistent translations, 28.6% stayed neutral, and 4.8% strongly disagreed. Furthermore, these tools were acknowledged by 71.4% for providing useful suggestions to enhance translation quality, with a mean score of 3.80. The neutral and disagreeing responses are relatively low at 33.4% and 28.6%, respectively. In terms of language, however, only 33.3% believed AI tools aid in understanding complex sentences and terminology, while over half of the participants selected neutral (52.4%) and disagreed (14.3%).

Table 2.

LLM students' perspectives on the benefits of AI integration in translation productivity and quality

No	Items	Level of agreement (%) (1: strongly disagree – 5: strongly agree)					Mean	Std. Deviation
		1	2	3	4	5		
1	AI tools help me complete translations faster.	2.1	2.1	40.4	38.3	17.0	3.65	0.86
2	AI tools have improved the accuracy of my translations.	0.0	2.1	8.5	44.7	44.7	4.31	0.72
3	AI tools help me understand complex sentences and terminology.	0.0	17.0	36.2	38.3	8.5	3.38	0.87
4	AI tools assist in maintaining consistency in my translations.	0.0	6.4	38.3	38.3	17.0	3.65	0.84
5	AI tools provide useful suggestions that improve my translation quality.	0.0	4.3	27.7	53.2	14.9	3.78	0.74

For LLM students, Table 2 shows that 55.3% of participants agree on the positive impact of AI tools on their translation speed. The number of disagreements is low (4.2%), while the proportion of neutral responses is relatively high (40.4%). Regarding the accuracy of translations, AI tools' contribution was positively perceived by 89.4% (mean score = 4.31). The proportion of participants who stayed neutral or disagreed was low at 9.6%. As for AI support in understanding complex sentences and terminology, nearly half of the students (46.8%) agreed, 36.2% took a neutral stance, and 17.0% disagreed. Regarding translation consistency, 55.3% agreed or strongly agreed, 38.3% remained neutral, and 6.4% disagreed. More noticeably, 78.1% perceived an improvement in their translation quality thanks to useful suggestions provided by AI tools (mean score = 3.78).

Table 3.

NMT students' perspectives on the benefits of AI integration in skill development

No	Items	Level of agreement (%) (1: strongly disagree – 5: strongly agree)					Mean	Std. Deviation
		1	2	3	4	5		
6	AI tools make translation tasks more accessible.	4.8	4.8	14.3	47.6	28.6	3.90	1.04
7	AI tools have increased my confidence in handling difficult translations.	0.0	4.8	19.0	57.1	19.0	3.90	0.76
8	Using AI tools has enhanced my critical thinking in translation.	4.8	4.8	19.0	52.4	19.0	3.76	0.99
9	AI tools have helped me develop better translation techniques (omission, addition, paraphrasing…)	4.8	23.8	23.8	23.8	23.8	3.38	1.24
10	AI tools have enhanced my overall translation skills.	0.0	9.5	28.6	38.1	23.8	3.76	0.94

Regarding skill development, as shown in Table 3, most NMT students (86.2%, mean score = 3.90) agreed that AI tools made translation tasks more manageable for them. Furthermore, 76.1% reported they became more confident in handling challenging translation tasks (mean score = 3.90), and 71.4% perceived an enhancement in their critical thinking in translation (mean score = 3.76). The proportions of neutral and disagreeing responses are lower, at 23.8% and 28.6%, respectively. In terms of the impact of AI tools on students' development of translation techniques, although nearly half of them reported agreement (47.6%), the rates of neutrality and disagreement are considerable at 23.8% and 28.6%, respectively. Concerning the AI effects on their overall translation skills, 61.9% showed positive perception, while 28.6% stayed neutral and 9.5% disagreed.

Table 4.

LLM students' perspectives on the benefits of AI integration in skill development

No	Items	Level of agreement (%) (1: strongly disagree – 5: strongly agree)					Mean	Std. Deviation
		1	2	3	4	5		
6	AI tools make translation tasks more accessible.	0.0	0.0	21.3	57.4	21.3	4.0	0.65
7	AI tools have increased my confidence in handling difficult translations.	0.0	2.1	34.0	40.4	23.4	3.85	0.80
8	Using AI tools has enhanced my critical thinking in translation.	0.0	2.1	25.5	46.8	25.5	3.95	0.77
9	AI tools have helped me develop better translation techniques (omission, addition, paraphrasing…)	0.0	8.5	42.6	40.4	8.5	3.48	0.77
10	AI tools have enhanced my overall translation skills.	0.0	8.5	31.9	53.2	6.4	3.57	0.74

Table 4 indicates that, like NMT students, LLM students showed a high level of agreement (88.7%) on AI's contribution to making translation tasks more accessible, and no participants disagreed (mean score = 4.0). Similarly, the number of students admitting that AI tools helped

increase their confidence in doing difficult translation tasks and improve their critical thinking is relatively high (63.8% and 72.3%, respectively). In terms of AI's impact on their translation technique development, although 48.5% agreed and 8.5% disagreed, the neutral rate is high at 42.6%. In their general evaluation of AI's effect on their overall translation skills, the responses are relatively similar: 59.6% perceived an enhancement, while 8.5% disagreed and 31.9% remained neutral.

In general, the findings reveal similar benefits of AI integration in translation quality and skill development perceived by both NMT and LLM students. They both acknowledged the positive impact of AI tools on their translation speed, accuracy, and consistency. These tools were reported to assist students in handling difficult translation tasks, enhance their critical thinking, and improve their overall translation skills. However, LLM students showed more positive perceptions regarding the impact of LLM tools on their understanding of complex sentences and terminology. In contrast, NMT students showed mixed responses to this issue.

Teachers' Perspectives

In the focus-group discussion, teachers acknowledged the positive impacts of AI integration on students' translation speed, accuracy, and translation skills. In terms of translation speed, teachers confirmed that AI tools greatly increased the speed of the students' translation process and improved the translation quality. They also agreed that the time saved by this process could be spent guiding students in deeper revision and editing activities. Following is the exchange among teachers:

> T#1: I have noticed that AI helps my students translate faster and more accurately, especially in terms of grammar and vocabulary…
>
> T#3: I agree. I think AI has greatly accelerated my students' translation speed. For common translation topics, AI provides quite good and accurate translations in terms of meaning.
>
> T#4: Yes, it really cuts down time spent on the first draft, so we can spend more time on revising and editing.

Teachers also appreciated AI for offering multiple translations with explanations of the differences between them. Besides, these tools provided instant feedback on students' translations and areas for improvement. Therefore, they believed that this helped facilitate students' deeper learning. They admitted that sometimes they felt surprised because their students could evaluate and explain which version was better than others:

> T#2: AI tools offered multiple different translation versions and could even explain the differences between the various translation versions. Students learned a lot from these different translation alternatives.
>
> T#5: (With a smile) Sometimes, my students even surprised me with how well they explained why one version is better than the other.
>
> T#2 and T#4 nodded, showing their agreement on the surprise.

In addition to speed and accuracy, teachers confirmed that AI tools also contributed to their students' expanded vocabulary, improved writing skills, and enhanced background knowledge. Moreover, the exposure to the use of vocabulary and writing styles in AI-generated translations could help students enhance their language proficiency. When students completed the translations, they could comprehend the text better and expand their background knowledge.

Challenges of AI Integration into Translation Studies

Alongside the benefits, the student survey and the teacher focus-group discussion also reveal several obstacles to students' translation studies.

Students' Perspectives

Table 5.

NMT students' perspectives on the challenges of AI integration in translation quality

No	Items	Level of agreement (%) (1: strongly disagree – 5: strongly agree)					Mean	Std. Deviation
		1	2	3	4	5		
1	AI-generated translations often lack naturalness and fluency.	9.5	4.8	47.6	28.6	9.5	3.23	1.04
2	AI tools sometimes produce inaccurate translations.	4.8	9.5	23.8	42.9	19.0	3.61	1.07
3	AI tools struggle with translating culturally specific content.	4.8	9.5	38.1	19.0	28.6	3.57	1.16
4	AI tools do not always understand the context of translations.	0.0	4.8	33.3	42.9	19.0	3.76	0.83
5	AI tools may struggle with translating idiomatic expressions or colloquial language.	4.8	0.0	23.8	33.3	38.1	4.00	1.04
6	AI-generated translations can sometimes lead to a loss of nuanced meaning.	9.5	0.0	28.6	38.1	23.8	3.66	1.15
7	AI-generated translations require significant proofreading and editing.	0.0	14.3	28.6	33.3	23.8	3.66	1.01

Table 5 shows NMT students' mixed experiences with the naturalness and fluency of AI-generated translations, with 38.1% agreeing or strongly agreeing, 47.6% remaining neutral, and 14.3% disagreeing or strongly disagreeing. Regarding translating culturally specific content, 47.6% showed their agreement, 38.1% stayed neutral, and 14.3% disagreed or strongly disagreed. In terms of the accuracy and context, participants showed a similar level of agreement at 61.9%. The proportions of neutral responses and disagreements are lower at 38.1%. When it comes to translating idiomatic expressions or colloquial language, the majority of participants (71.4%) perceived this as a challenge to AI (mean score = 4.00). Many of them (61.9%) also admitted that AI-generated translations can sometimes lead to a loss of nuanced meaning. Similarly, 57.1% agreed that AI-generated translations need further proofreading and editing, 28.6% were neutral, and 14.3% disagreed.

Table 6.

LLM students' perspectives on the challenges of AI integration in translation quality

No	Items	Level of agreement (%) (1: strongly disagree – 5: strongly agree)					Mean	Std. Deviation
		1	2	3	4	5		
1	AI-generated translations often lack naturalness and fluency.	4.3	14.9	46.8	23.4	10.6	3.21	0.97
2	AI tools sometimes produce inaccurate translations.	2.1	10.6	36.2	42.6	8.5	3.44	0.87
3	AI tools struggle with translating culturally specific content.	0.0	10.6	42.6	40.4	6.4	3.42	0.77
4	AI tools do not always understand the context of translations.	0.0	4.3	40.4	42.6	12.8	3.63	0.76
5	AI tools may struggle with translating idiomatic expressions or colloquial language.	0.0	0.0	27.7	40.4	31.9	4.04	0.77
6	AI-generated translations can sometimes lead to a loss of nuanced meaning.	0.0	10.6	40.4	34.0	14.9	3.53	0.88
7	AI-generated translations require significant proofreading and editing.	0.0	4.3	44.7	48.9	2.1	3.48	0.62

As for LLM students, Table 6 shows that 34.0% agreed or strongly agreed that AI translations often lack naturalness and fluency, 46.8% expressed uncertainty, and 19.2% disagreed or strongly disagreed. In terms of translation accuracy, 51.1% reported that AI tools sometimes fail to ensure the accuracy of the text. Similarly, a majority of participants agreed that AI tools cannot understand culturally specific content, context, or nuanced meaning, and that AI-generated translations require significant proofreading and editing (questions 3, 4, 6, and 7, with 46.8%, 55.4%, 48.9%, and 51.0%, respectively). Notably, the rate of neutral responses to these questions is quite high (approximately 40%). For question 5, most participants (72.3%) agreed that it may be challenging for AI tools to translate idiomatic expressions or colloquial language (mean score = 4.04), 27.7% were neutral, and no participants showed disagreement.

Table 7.

NMT students' perspectives on the challenges of AI integration in skill development

No	Items	Level of agreement (%) (1: strongly disagree – 5: strongly agree)					Mean	Std. Deviation
		1	2	3	4	5		
8	Using AI tools can make me too dependent on AI-generated translations.	0.0	9.5	47.6	42.9	0.0	3.33	0.65
9	Relying on AI tools may hinder the development of my translation skills.	4.8	14.3	33.3	33.3	14.3	3.38	1.07
10	The integration of AI into translation might reduce the role of human translators.	9.5	0.0	23.8	33.3	33.3	3.80	1.20

Regarding skill development, from NMT students' viewpoints presented in Table 7, the percentages of agreement and neutrality for the dependence on AI-generated translations are

quite similar, at over 40%, while that of disagreement is low, at 9.5%. In the next question, 47.6% agreed or strongly agreed, 33.3% chose neutral, and 19.1% expressed their disagreement that these tools might hinder their translation skill development. Regarding the impact of AI integration on the role of human translators, 66.6% agreed or strongly agreed, 23.8% stayed neutral, and 9.5% disagreed that AI might reduce their role.

Table 8.

LLM students' perspectives on the challenges of AI integration in skill development

No	Items	Level of agreement (%) (1: strongly disagree – 5: strongly agree)					Mean	Std. Deviation
		1	2	3	4	5		
8	Using AI tools can make me too dependent on AI-generated translations.	2.1	0.0	51.1	31.9	14.9	3.57	0.82
9	Relying on AI tools may hinder the development of my translation skills.	0.0	2.1	38.3	48.9	10.6	3.68	0.69
10	The integration of AI into translation might reduce the role of human translators.	0.0	8.5	38.3	46.8	6.4	3.51	0.74

Table 8 highlights the challenges perceived by LLM students. In particular, 46.8% acknowledged over-reliance on AI tools for their translations. Although the rate of disagreement is very low (2.1%), a significant 51.1% chose a neutral stance. In the next question, 59.5% agreed that such reliance might hinder the development of their translation skills, 38.3% remained neutral, and only 2.1% disagreed. Concerning the role of human translators, 53.2% agreed, 38.3% opted for neutral, and 8.5% disagreed that integrating AI into translation processes might diminish this role.

In short, both groups perceived limitations of AI tools in understanding the context, culturally specific content, nuanced meaning, idiomatic expressions, or colloquial language. Other challenges include increasing students' dependence, hindering the development of their translation skills, and diminishing the significance of human translators. Additionally, AI-generated translations were believed to be further proofread and edited. However, the results from both groups reveal a shared uncertainty regarding the naturalness of AI-generated translations, with nearly half of the respondents in each group staying neutral. NMT students expressed slightly more concern about naturalness and fluency than LLM students.

Teachers' Perspectives

Regarding challenges, teachers raised their concerns about the lack of naturalness in AI-generated translations. They said that translations into Vietnamese require careful revision and refinement due to the nuanced differences in language and culture. Therefore, students had to apply the translation techniques they learned to refine their translations and make them more natural. Otherwise, students might not ensure the nuances of the Vietnamese language in their translations.

> Sometimes AI-generated translations were not entirely natural, especially those from English to Vietnamese. Because there are differences in culture and language, the English–Vietnamese translation should be carefully examined even when it seems accurate at first glance (T#2).

Teachers also pinpointed that AI occasionally provided inappropriate translation for specialized

vocabulary, particularly when translating English into Vietnamese. Although they admitted that the AI translation of the terminology might be right, the tone and style may need revisions. Teacher T#1 commented that in some cases, the tone or level of formality was not always appropriate. Therefore, they had to explain to students why "*something that seems 'correct' isn't really appropriate"* (T#5).

In terms of critical thinking, the discussion revealed students' lack of ability to assess and select appropriate translations from AI outputs critically. Teachers admitted that their students sometimes did not show high-level thinking skills upon evaluating and making decisions about the final translation versions:

> T#3: Some students did not know how to evaluate and choose between different translation equivalents that AI provided.
>
> T#2: Yes, and actually, they often just choose the first version AI gives them without thinking. It seems that they completely believe in AI translations…

Regarding students' reliance on AI tools for translation, teachers expressed concern about students becoming overly dependent on them. They noted that students tended to use AI tools for their translations rather than start translating on their own. They believed that this might hinder students' development of translation skills, as well as the critical thinking and problem-solving skills necessary for effective translation.

> T#5: Without AI support, some of the students' translations were very poor and contained many errors.
>
> T#4: That's true. And some students would panic if they could not access the Wi-Fi. They seemed worried because they could not use the Internet to help them translate.

Suggestions from Students and Teachers

Students and teachers also provided suggestions to enhance the effectiveness of integrating AI tools into translation studies. In the questionnaire, students expressed a desire for more in-class translation practice tasks in which teachers provide hands-on experience with AI tools to translate and revise their own translations. They also hoped to receive more detailed guidance from teachers on how to make the most effective use of AI tools to analyze and evaluate AI-generated translations.

Teachers suggested that students use AI tools to complete their translation homework or assignments. They recommended that students work in groups to share experiences with appropriate AI tools for specific translation tasks, as well as to evaluate and refine AI-generated translations. Furthermore, teachers emphasized that they should be open to feedback, broaden their domain-specific knowledge and vocabulary, and have their students flexibly combine AI-assisted translation with independent practice to strengthen the human role in translation.

Discussion

Benefits of AI in Translation

The findings show that AI has brought clear and immediate changes to the translation classroom. The first improvements students mention are speed and fewer surface mistakes. More than 70% of NMT users and almost 90% of LLM users reported that their work moved faster and looked cleaner. With an AI draft available at the beginning, many students no longer feel the same pressure when starting a translation task, so they can move on to revision much

sooner.

Classroom activities also shift with this change. Students spend more time reviewing different versions, discussing why one option might work better than another, and adjusting the text to fit the context. This observation aligns with what Gladkoff et al. (2024) and Moneus & Sahari (2024) argue: that machine translation is most useful as a base to be refined, not as a translation that can stand on its own.

LLM support also appears clearer than NMT in the parts where students usually struggle, especially long or more complex sentences. The improvement is not large, but almost half of the LLM users felt that the model helped them understand structure more easily. Because of this shift, the skill that stands out in the findings is not the ability to produce a full translation from the beginning; it is the ability to evaluate what AI provides, adjust the tone, choose the right wording, and make decisions about meaning. These abilities recur in students' feedback.

Challenges of AI in Translation

Along with the positive effects, the study also identifies several limitations that both teachers and students noted. Problems related to naturalness, idioms, and nuance appear most often. Only about one-third of the students felt that the AI output sounded natural, a finding similar to that of Ashraf (2024) and Castaldo et al. (2025), who observed AI's struggle with subtle meanings and culturally shaped expressions. In these parts of the text, students usually have to revise the draft by hand, especially when the tone or style needs to match the original more closely.

Another concern that appears quite clearly in the data is dependence. Almost half of the students said they were worried about relying on AI too much, and many teachers also noticed that students often start with an AI-generated draft rather than forming their own first reading of the source text. This tendency is close to the caution raised by Chen (2024), who mentioned that frequent use of AI may reduce learners' initiative in processing language. But this study also finds that students still demonstrate strong analytical and evaluative skills. What seems to develop more slowly is their ability to construct meaning independently, without depending on the initial suggestion provided by AI.

AI's support for complex or meaning-dense sentences is also limited. Only 33.3% of NMT users and 46.8% of LLM users felt that AI helped them better understand difficult structures, suggesting that semantic reasoning and deeper interpretation still rely mainly on learners. When these results are considered together, a clear pattern can be seen: students become more capable in post-editing, yet their ability to produce an original translation does not improve at the same pace. AI helps reduce the basic workload, but the core work of building meaning—central to translation—still depends on the learners' own interpretive skills.

Conclusions & Implications of the Study

The combination of both students' online survey and teachers' focus group discussion data helped to explore different perspectives on the application of AI tools in translation learning and teaching. This mixed-method research highlighted the benefits of AI tools in improving translation speed and accuracy and in providing students with initial drafts that support their translation process. The study also highlighted some challenges of AI-generated translations, including the naturalness of the target language and the perceived risk of English major undergraduate students' over-reliance on technology in translation practice. Pedagogical suggestions for translation curriculum designers, teachers, and students are presented below,

based on the study's findings.

Curriculum Designers

It is undeniable that AI tools have made great progress in the translation industry, which helps translators save time and effort in processing a translated version and improves the overall quality at the surface level. This great leap poses a challenging question for translation curriculum designers: how to prepare future translators for the prevalence of large language models and the many available AI tools today. The era of traditional translation training has gone and should be updated by a translation curriculum integrated with smart technology. It's high time for curriculum designers to blend AI translation-supported tools in particular and technology in general with feasible, flexible, and comprehensive programs for undergraduate translation students. This doesn't mean that great emphasis should be placed on applying AI tools to the curriculum, but a balance between taking advantage of AI-supported technology and training human translation expertise is more essential for developing a translation curriculum for students. The focus of translation training programs may be expanded from merely translating to also including post-editing, developing students' critical thinking and translation refinement skills while still maintaining training in independent translation. Translation lessons should not be limited to pens and paper documents, but students need to be involved in doing real-life translation projects or practical and regularly updated assignments in groups to develop their peer feedback based on teachers' specific criteria and enhance their self-regulated learning as a result. This inclusion will give students opportunities to apply their being-taught translation techniques into practice and help them self-identify both pros and cons of AI tools while experiencing the actual process of editing and refining AI-generated translation versions. In addition, students' competences in problem-solving skills and handling complex and nuanced translation difficulties in real-world tasks can also be trained and given the room to further develop. Thanks to this on-track development of the translation programs, the development of well-rounded translation professionals can be better supported.

Teachers

The role of teachers is also important; they should guide students in using AI tools in an appropriate way, without becoming overly dependent on them. While the potentials of AI tools are acknowledged by students, doubts about the quality of AI-generated translations are expressed, and teachers also note that some students tend to rely on AI suggestions too quickly without forming an initial interpretation of the source text. Therefore, integrating AI tools into homework and practical translation tasks should be encouraged, provided that teachers can provide students with clear feedback on how to improve AI-generated texts. Teachers should assist their students in developing the ability to evaluate AI translation outputs so that they know when and how to question the results, which would be very useful for students to deal with challenging or creative translation activities. In addition, how to critically approach AI-generated translations, particularly the steps of post-editing, needs to be paid attention to and included in translation teaching. Group discussions among students to share ideas and exchange their knowledge in evaluating AI-generated texts should also be promoted in class. As a result, the students' ability to evaluate, edit, and refine AI translation outputs can contribute to the successful training of competent and autonomous translators.

Students

Students may find AI tools quite helpful for efficiency. Nevertheless, when students heavily depend on these tools, there is a likelihood that their ability to form an initial interpretation of the source text is limited. To prevent it, students' involvement can be increased by reviewing and refining AI-generated translations, resulting in accurate, natural-sounding translations. In the blooming era of AI tools nowadays, students are allowed and even encouraged to use AI tools in their translation practice and during translation lessons. They are also given opportunities to participate in more and more lifelike translation projects or assignments, which help them integrate both their translation techniques and technological skills in handling real-world translation tasks. More importantly, students are provided with opportunities for self-study through peer and teacher feedback, and they develop their critical thinking to evaluate AI-generated translations. This process can last weeks or months, but students can gradually edit and improve the AI-generated translation output independently and later master the effective use of AI tools in their translation practice.

Limitations and Future Works

Limitations are unavoidable in research, and some of the shortcomings in this study should be considered as follows. Firstly, the study covers both LLM and NMT tools that students use in their translation practice, rather than deeply exploring the influence of specific AI tools on students' translation study. Secondly, the small sample size, including just 68 students from one intake at a university and five teachers involved in one focus group discussion, limits the generalizability of the findings. This may raise concerns among other translation teachers and researchers about replicating the study in similar contexts. Lastly, students and their application of AI tools are the main subjects of the study; therefore, using only online surveys with students may not yield broad, deep insights into the impact of AI tools on students' translation studies. Incorporating focus group discussions or semi-structured interviews with students can offer deeper insights into students' perspectives on the use of AI tools.

Based on the current findings, future research can be done in many directions related to the integration of AI tools into translation learning and teaching. In the first place, an investigation into the influence of a specific NMT or LLM tool on translation study can be conducted to provide a deeper exploration of how each AI tool affects the processes of translation study. Additionally, the sample size of research participants should be increased and selected from more diverse educational contexts to ensure a larger, more representative group and to enhance the generalizability of the findings. Besides, the qualitative data can be triangulated through employing case studies or classroom observations in future studies to gain deeper insights into not only students' perspectives but also their actual practice in translation studies. Last but not least, this cross-sectional study can serve as a basis for future research in the field, and the integration of AI tools' impact on the development of students' translation skills over time can be explored through longitudinal studies.

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Biodata

NGUYEN Thi Minh Hanh (Vietnam) has been working as a lecturer at Hanoi University of Industry since 2006. She is currently the Associate Dean of the English Language Faculty, School of Languages and Tourism. Her research interests include Translation, ICT in English language teaching, Project-based Learning, Blended Learning, Testing and Assessment. She presented at VietTESOL 2018 & 2021, TESPA in Taiwan (online) 2020, International TESOL in the USA (online) 2021, AsiaCALL 2022, GloCALL 2023 & 2024, and ICTE 2025. Contact: nguyenthiminhhanh@haui.edu.vn

BUI Thi Thu Giang (Vietnam) has been teaching English at Hanoi University of Industry for 14 years. She completed her BA and MA programs in English Language Teaching Methodology at the University of Languages and International Studies, Vietnam National University. She is currently responsible for designing and developing the English Linguistics curriculum,

designing English courses, and delivering lectures in speaking and listening skills. Her professional interests include curriculum design, teaching methodology, and testing and assessment. Contact: buithithugiang@haui.edu.vn

CAO Thi Hai Hang (Vietnam) has been teaching English at Hanoi University of Industry since 2009. She is responsible for a variety of courses relating to Language Skills, Translation and Cross-Cultural Communication. Hang received a Master of Science Degree in Teaching English as a Foreign Language from Southern New Hampshire University (USA) in 2011. Her area of professional interests includes designing and delivering blended learning lessons. Contact: caothihaihang@haui.edu.vn