

AI-Assisted Translation Technology Poses New Challenges to Translation Competence Development in Human Translators

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“Understanding what AI can and cannot do well within the context of your course will be key as you contemplate revising your assignments and teaching.”

-Hechinger Report

HISTORICALLY, major technological innovations have invariably brought transformative changes to various sectors of human society, and technology has played a crucial role in extending human capabilities. Currently, the application of generative artificial intelligence (GenAI) technology has resulted in significant breakthroughs in the field of translation, substantially transcending the capabilities of traditional machine translation (MT) tools. Traditional MT primarily relies on predefined rules and corpora for mechanical language conversion, whereas GenAI systems like ChatGPT and DeepSeek exhibit greater capacities to accurately understand the semantics, context, and cultural background of the text and can generate more natural and fluent translation outputs through deep learning and natural language processing. In addition, GenAI systems can automate the processing of large volumes of textual data, instantly producing high-quality drafts of translations, and continuously improve translation accuracy through ongoing learning and optimization (Wang & Chen, 2025).

AI-assisted translation technology is reshaping the landscape of the language service industry. It has the potential to reduce the cost of translation services, enabling more businesses and individuals to access high-quality language services. In the meantime, it has catalyzed the emergence of new language service modalities, such as AI-based translation platforms and customized translation services, which not only enrich the supply in the language service market but also drive the upgrading of the industry (Wang, 2024). Specific benefits of AI-assisted translation technology include: (i) increased translation efficiency. With their tremendous capacities for contextual understanding, large language models can meet diverse, personalized translation needs, help enhance translation efficiency.

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models can meet diverse, personalized translation needs, help enhance translation efficiency, and enable the rapid completion of large volumes of ordinary translation tasks; (ii) easy access to information. GenAI, leveraging large-scale pre-trained corpora and knowledge graphs, enhances the availability, accessibility, and usability of knowledge (Zhou, 2023); (iii) improved management of language assets. AI systems can automatically identify, extract, and categorize specialized terms and emerging vocabulary by intelligently analyzing massive bilingual or multilingual corpora; dynamically update glossaries to ensure the timeliness and abundance of terminology; and recommend in real-time appropriate translations of terms according to the characteristics of the project, guaranteeing consistency and accuracy in terminology adoption; (iv) enhanced management of translation projects. The AI-based human-machine collaborative translation modality enables effective coordination of multi-agency, multilingual translation work, reducing communication effort and potential human errors and making the project workflow smooth, transparent, and controllable through intelligent cooperation (Liu & Zhang, 2025).

Nevertheless, AI-assisted translation technology has its limitations, particularly in handling text with high cultural sensitivity and complex contexts. Meanwhile, human translators have the advantages of possessing cross-cultural discernment, professional expertise, and contextual comprehension, which are not easily replaceable. This makes human-machine collaboration an advisable choice for ensuring successful translation, posing, in turn, new requirements on professional competence of human translators. Contemporary translation practitioners need to develop comprehensive technology-related skills in prompt engineering, human-machine collaboration, language assets management and so on, aside from language competence, as a result of the deep permeation of AI technology in the translation industry (Wang, 2025).

In their Assessment of Translation Competence Development Needs of Foreign Language Majors at Guangxi University of Foreign Languages, published in this issue, the authors identified ten essential competences of human translators in the AI era on the basis of an extensive literature review, developed a questionnaire to survey the current and expected levels of translation competence in the ten dimensions among the students at Guangxi University of Foreign Languages, quantitatively examined the correlations between the ten competences, and proposed an “Integrated Human and Digital Communication Platform for Translation Competence Development” (Liang et al., 2025). By providing empirical research evidence, the study offers valuable insights for translation education reform in the context of AI-driven transformation of the translation industry.

References

- Liu, S. & Zhang, Y. (2025). From MTPE to HACT: A study of large language model-driven innovation in translation procedures. *Foreign Language Education Research*, 13(01), 18-26. DOI: <https://doi.org/10.16739/j.cnki.cn21-9203/g4.2025.01.008>.
- Liang, M., Panyanuwat, A., Rupavijetra, P., & Lomlai, S. (2025). Assessment of translation competence development needs of foreign language majors at Guangxi University of Foreign Languages. *Science Insights Education Frontiers*, 30(2): 4927-4950. DOI: <https://doi.org/10.15354/sief.25.or837>
- Wang, H. (2024). Transformation of language services and innovation in language service education in the GenAI era. *Journal of Beijing International Studies University*, 46(06), 102-115. Available at: <https://link.cnki.net/urlid/11.2802.H.20241231.1521.002>
- Wang, S. & Chen, Y. (2025). The impact of generative artificial intelligence on the development of the translation industry from the perspective of sociology of technology. *Shanghai Journal of Translators*, 2025(04), 59-65.

- Wang, S. & Luo, X. (2025). Intelligent translation literacy in the GenAI era: Practical foundations, academic evidence, and a conceptual framework. *Foreign Language Education*, 46(01), 59-65. DOI: <https://doi.org/10.16362/j.cnki.cn61-1023/h.2025.01.001>.
- Zhou, Z. (2023). Application of ChatGPT in Translation Teaching: Changes, challenges, and countermeasures. *Journal of Beijing International Studies University*, 45(05), 134-146. Available at: <https://link.cnki.net/urlid/11.2802.H.20230927.1759.004>

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