

The Inspiration of Translation Technology Education in The Era of Artificial Intelligence to the Cultivation of Translators' Ability

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Abstract: Artificial intelligence technology continues to integrate into the translation industry. Machine translation, generative artificial intelligence and computer-aided translation tools continue to change the traditional translation production mode, and also put forward new requirements for the knowledge structure, professional role and professional ability of translators. Traditional translation education attaches more importance to language knowledge and translation skills. The cultivation of technical awareness, human-computer collaboration, translation quality assessment and other abilities is relatively insufficient. There is a certain adaptation problem between talent cultivation and the needs of the intelligent translation industry. Based on this, the study analyses the actual requirements of translation technology education in the era of artificial intelligence and the cultivation of translators' ability, and puts forward a specific cultivation path. Meanwhile, by strengthening the construction of teachers, improving the intelligent teaching platform, and establishing a school-enterprise coordination mechanism, we will provide a guarantee for the reform of translation technology education. The author takes the view that translation education in the era of artificial intelligence should adhere to the subjectivity of translators, organically combine language ability, technical literacy and comprehensive judgement ability, promote students to form technical application, translation evaluation and human-computer collaboration ability, and cultivate composite talents who can adapt to the intelligent translation environment.

Keywords: Artificial Intelligence; Translation Technology Education; Translator Ability; Talent Cultivation.

1. Introduction

The rapid iteration of artificial intelligence technology has gradually made translation activities enter the stage of intelligent development. Language models, machine translation and computer-aided translation tools are increasingly widely used in text generation, terminology processing and translation optimisation. Changes in the technical environment not only improve the productivity of translation, but also make translators face new professional requirements [1-3]. The traditional training model of relying on language foundation and manual experience to complete translation tasks needs to be adjusted accordingly. In current practice, some translation teaching still has insufficient integration of technical content, insufficient connection between practical links and industry scenarios, etc., and students' ability to use and evaluate intelligent tools still leaves room for improvement. Based on the development trend of the industry, translation education should re-examine the relationship between technology and professional ability, and strengthen technology application, human-computer collaboration and translation judgement training while consolidating the language foundation. Discussing the reform direction of translation technology education in the era of artificial intelligence has certain practical value for improving the translator's ability training system and improving the job adaptability of translators. The discussion here starts from that practical tension rather than from the idea that technology or policy offers an easy answer.

2. The Actual Requirements of Translation Technology Education in The Era of Artificial Intelligence

2.1. Strengthen Technical Awareness

The influence of artificial intelligence reaches beyond the translator's toolbox; it is also changing how translators understand their own work. Some translation learners still regard technical tools as ancillary means to improve efficiency, and lack the awareness of actively understanding new technologies, analysing technical results and using technology to solve problems. This understanding is easy to cause a disconnect between professional learning and industry changes. Translation technology education needs to help students form a stable technical awareness, so that they can understand the role of artificial intelligence from the overall process of translation tasks. During the teaching process, through case analysis, tool demonstration and project practice, students can compare the differences in efficiency and quality of manual translation, machine translation and human-computer collaboration mode, and guide them to recognise the semantic deviation, cultural misreading and logical errors of machine-generated content. The formation of technical awareness does not require every translator to become a technical developer, but requires translators to understand technology, use technology and maintain the ability to judge technical results. Integrating this awareness into professional education will help students establish a learning concept that actively adapts to changes in the industry, and lays a cognitive foundation for subsequent mastery of specific translation techniques.

2.2. Update the Teaching Content

Traditional translation courses usually revolve around translation theory, language conversion skills and text analysis, which still have fundamental value. Yet the development of artificial intelligence requires further integration of intelligent translation technology into teaching. A study published in *Instructional Science* in 2025 surveyed 63 college students and found that they used generative artificial intelligence frequently in translation learning and practice. Among them, 36.51% of students often use it, 31.75% sometimes use it, 11.11% always used, and only 4.76% never used. As shown in Figure 1, the completed artificial

intelligence has gradually entered the translation learning scenario, and the course content needs to respond to this change in time. Colleges and universities can add machine translation, translation memory library, terminology library, computer-aided translation, post-translation editing and generative artificial intelligence application in combination with professional direction, and embed technical training into specific translation tasks. In business translation, for example, artificial intelligence is used to generate a first draft, and then modify it around terms, style and cultural appropriateness; in scientific and technological translation, carry out terminology database construction training, so that technical tools become an important part of translation practice.

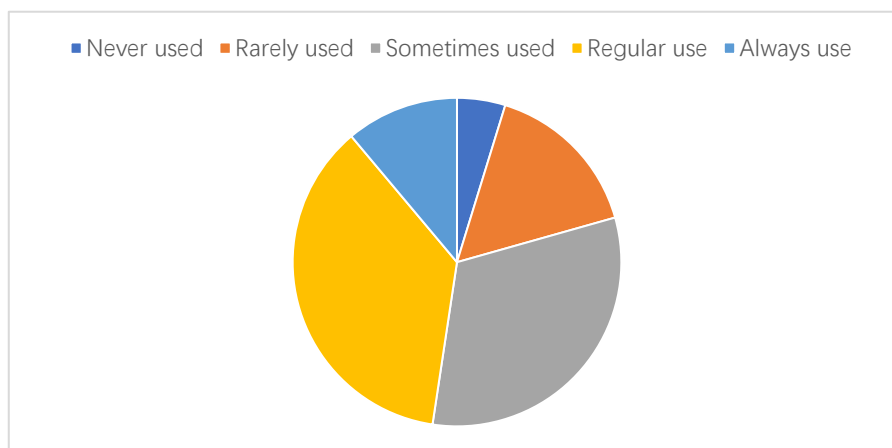


Figure 1. Frequency of use of generative artificial intelligence in translation learning by college students

2.3. Change the Teaching Concept

Artificial intelligence can quickly generate translations, but the quality of translation does not depend entirely on the speed of generation. The context, cultural meaning, communication purpose and value judgement behind the text still require human participation[4-5]. For that reason, translation technology education should not weaken students' subjectivity training due to the enhancement of artificial intelligence functions. The teaching concept should gradually change from "teaching students to complete translation" to "cultivating students to master translation technology to complete complex tasks". In the classroom, machine-generated translations can be used as teaching materials, so that students can take the initiative to discover the problems, explain the basis for modification, and cultivate language judgement and text analysis ability through the comparison of human-machine results. In this process, teachers should also change from mere knowledge lecturers to designers and guides of the learning process, and guide students to form independent thinking and independent decision-making habits. Only when students have a clear awareness of translation purpose and quality judgement standards can artificial intelligence tools really play an auxiliary role. The new teaching concept can avoid students' excessive dependence on machine translation, so that the application of technology is based on solid professional ability, so as to realise the effective combination of the efficiency advantages of artificial intelligence tools and the main advantages of translators.

3. The Practical Path of Translation Technology Education to Empower Translators' Ability Cultivation

3.1. Build a "Language + Technology" Integrated Curriculum System

The curriculum system is an important carrier for the implementation of the goal of talent cultivation into teaching practice. Translation education in the era of artificial intelligence needs to break through the separation of language courses and technical courses. In the existing teaching, translation theory, translation practice and technical tools are often carried out according to different courses. Although students can master relevant knowledge, they are prone to the situation of "can translate but can't use tools" or "can operate software but lack of translation judgement". In response to this problem, colleges and universities can redesign the curriculum system around the ability structure of translators, and modularly integrate language foundation, translation theory, professional knowledge and digital technology. The specific integration direction is shown in Table 1. machine translation and post-translation editing training are added simultaneously in the translation practice course, for example, terminology management and corpus application are integrated into the professional translation course, and artificial intelligence-assisted translation project is set up in the comprehensive practical training course. A progressive relationship can also be established between courses, so that students can gradually transition from basic tool operation to complex project management, promote students to understand the technical value in real translation scenarios, and realise the synchronous growth of professional

knowledge and technical ability.

Table 1. Construction of integrated curriculum system

Integration direction	Main Content	Training Objectives
Language foundation + translation theory	Strengthening language foundation and translation theory teaching	Enhance professional translation skills
Translation practice + intelligent technology	Integrating machine translation and post-editing training	Improve technical application capabilities
Professional translation + digital tools	Incorporating terminology management and corpus application	Strengthen professional translation ability
Comprehensive training + project management	Setting up AI-assisted translation projects	Enhance comprehensive practical and project management skills
Course progression + ability integration	Gradually transitioning from tool operation to complex tasks	Realize the coordinated development of professional and technical capabilities

3.2. Set up a Real Translation Project

Real tasks reveal translation ability more clearly than classroom exercises do. It is difficult for students to form a complete professional ability by relying only on single-sentence translation and software demonstration in the classroom. Translation technology education can introduce enterprise projects, simulated orders or real corpus to build a practical environment close to the industry workflow. In 2025, Praputa's project-based learning study on 49 translation students examined their perceptions of a translation project. As shown in Figure 2, 65.31% of the students agreed and 20.41% fully agreed that the project can motivate the improvement of English proficiency; 59.18% agreed and 28.57% fully agreed that the translation project was implemented successfully; 69.39% agreed and 24.49% fully agreed that the translation project was challenging; 40.82% agreed and 51.02% fully agreed that the implementation process of the project has practical value; 36.73% agreed and 63.27% fully agreed that the translation project was practical.

Overall, students' positive evaluations of the translation project are prominent, which suggests that real tasks can enhance students' initiative to participate in translation practice.

During project practice, students can analyse text types according to customer needs, determine translation strategies, choose artificial intelligence and computer-aided translation tools, and complete tasks such as machine translation processing, terminology unification, quality inspection and result submission. After the end of the project, we can also organize a review, let students explain the basis for tool selection, modify the process and quality control methods, transform abstract technical knowledge into specific operation experience, and cultivate professional abilities such as time management, teamwork and customer communication, so as to prepare for the actual translation position.

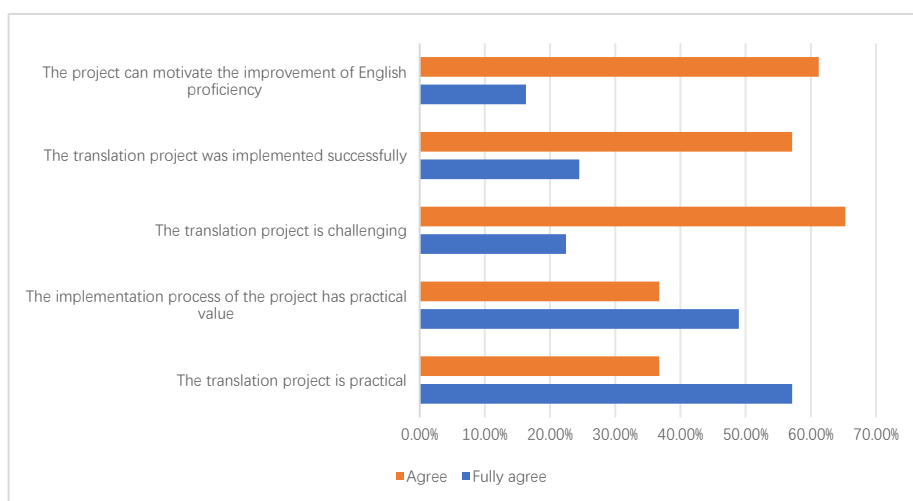


Figure 2. Comparison chart of the teaching effect of translation projects

3.3. Promote Human-Computer Collaborative Teaching

Once artificial intelligence becomes part of the classroom, the old teaching model no longer fits every learning task. In traditional translation classes, teachers usually provide the original text, students complete the translation, and then teachers give unified lectures and comments. This method can

train basic language skills, but it does not cover the workflow in the intelligent translation environment. Human-computer collaborative teaching can embed artificial intelligence into the whole process, so that students can learn in the process of interacting with tools. Teachers can ask students to complete independent translation and artificial intelligence-assisted translation respectively, and then compare the two results to analyse which tasks artificial intelligence can improve

efficiency and which links still need to be handled manually. For generative artificial intelligence, students can also be trained to design clear task instructions and verify the output results. It should be emphasised that human-computer collaboration does not allow machines to undertake all the translation tasks, but to improve the learning effect through reasonable division of labour. In continuous practice, students can gradually form the ability of technical selection, result judgement and problem correction, so as to realise the transformation from "using tools" to "driving tools".

4. Guarantee Mechanism for Translation Technology Education in the Era of Artificial Intelligence

4.1. Strengthen The Construction of Teachers

Teachers are important implementers of the reform of translation technology education. Teachers' own technical literacy directly affects whether artificial intelligence tools can be truly integrated into the classroom. Some translation teachers have a solid foundation of language and translation theory. Yet their understanding of generative artificial intelligence, machine translation platform and data processing tools is relatively limited, and it is easy to have the problem that the updating speed of teaching content cannot keep up with the changes in industry technology[6-7]. For that reason, colleges and universities should establish a continuous mechanism for improving the digital ability of teachers to provide technical training, enterprise practice and teaching and training opportunities for teachers, so that they can master the basic principles and application methods of artificial intelligence-assisted translation. Teacher training should not stop at the level of software operation, but should also pay attention to the evaluation of artificial intelligence output results, teaching scenario design and technical ethics. The school can also encourage teachers of different majors to cooperate. Language teachers are responsible for the cultivation of translation ability, and information technology teachers provide technical support to jointly develop integrated courses. After teachers' digital literacy is improved, they can more accurately judge the scope of application of artificial intelligence technology in different teaching links, so as to improve the professionalism and effectiveness of translation technology teaching.

4.2. Improve the Construction of Teaching Platform

Translation technology education needs a stable digital teaching environment as a support. It only relies on teachers to temporarily display tools in the classroom, and it is difficult to form continuous practical training. Colleges and universities can build a translation training platform in combination with the professional scale and teaching needs, and reasonably integrate resources such as machine translation, computer-aided translation, terminology library, corpus library and artificial intelligence tools to provide students with a relatively complete practical environment. Platform resources should also be constantly updated, and new tools and cases should be supplemented according to the technological development of the industry, so as to avoid the teaching platform staying in the outdated software environment for a long time. Meanwhile, the school needs to pay attention to data security and intellectual property rights,

standardise the management of the translation corpus used in teaching, and clarify the basic rules that students should follow when using artificial intelligence tools[8-10]. The value of platform construction lies not only in providing software, but also in the formation of a repeatable, traceable and evaluable learning environment. Students can continue to complete translation projects inside and outside the class, and teachers can also understand the changes in students' ability according to their learning records, so as to provide conditions for personalised guidance and teaching evaluation.

4.3. Establish a School-Enterprise Coordination Mechanism

The technological changes in the translation industry have strong practical attributes. It is difficult for colleges and universities to grasp the specific requirements of enterprises for intelligent translation talents in time by relying on classroom teaching alone. Establishing a school-enterprise coordination mechanism can bring talent training closer to the reality of the industry. Colleges and universities can establish cooperative relationships with translation companies, localisation enterprises, cross-border e-commerce platforms, etc. to jointly develop practical courses and project cases. Enterprises can provide real business scenarios and job ability requirements, and schools are responsible for transforming them into teaching tasks. By participating in enterprise practice, students can understand the use of artificial intelligence-assisted translation in actual work, and can also recognise the specific requirements of enterprises for delivery efficiency, terminology consistency and quality control. Enterprise personnel can also participate in curriculum guidance and achievement evaluation to provide students with more direct career feedback. The school and the enterprise can also carry out long-term cooperation around teacher training, internship practice and curriculum development to form a resource sharing mechanism. The evidence suggests that it can not only improve students' job adaptability but also help colleges and universities adjust the teaching content in time, so that translation technology education and industry needs in the era of artificial intelligence can form a closer connection.

5. Conclusion

Artificial intelligence technology continues to reshape the production process and talent needs of the translation industry, and translation technology education also needs to change from the cultivation of traditional language skills to the coordinated development of language ability and technical literacy. Although artificial intelligence can undertake some basic translation tasks, translators still play an irreplaceable role in context analysis, cultural understanding, translation evaluation and professional judgement. Colleges and universities should optimise the curriculum system around the intelligent translation environment, integrate artificial intelligence tools into translation practice teaching, and improve students' technical application ability and comprehensive judgement ability through real projects and human-computer collaborative training. Meanwhile, we will strengthen the cooperation between teachers, teaching platforms and schools and enterprises to provide continuous support for the cultivation of translation talents. This promotes translators to form a comprehensive ability to rationally use intelligent tools, effectively control translation

quality and solve complex language problems, and better adapt to the development needs of the translation industry in the era of artificial intelligence. The balance will still depend on how these ideas work in everyday practice, and that question cannot be settled by one policy alone.

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