

Construction of a Human-AI Collaborative Model for College English Translation Teaching Driven by Generative AI

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Abstract: The generative AI technology is constantly evolving and innovating. The paradigm shifts in language teaching implementation brought about by it have provided new technology support and pathway support for the reform of college English translation teaching. The traditional translation teaching suffers from problems such as rigid teaching models, lack of personalized guidance, and insufficient real-situational teaching. It struggles to meet the demands for translation talent cultivation in the new era. By teasing out the research status of the integration of generative AI and English translation teaching, this paper analyzes the underlying logic of human-AI collaborative teaching and its practical significance, and discusses current challenges faced by human-AI collaborative teaching in higher education. Then, it constructs a human-AI collaborative teaching model suitable for the translation teaching scenarios in higher education, proposes corresponding solutions, aiming to promote the deep integration of technology empowerment and translation teaching, improve the quality of college English translation teaching, and cultivate students' comprehensive translation capabilities.

Keywords: Generative AI; College English; Translation Teaching; Human-AI Collaboration; Teaching Model Construction

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1. Introduction

The advent of the digital-intelligence era has pushed higher foreign language education into a new technology-supported and model-updated transformation stage. As a core teaching module of college English, English translation integrates both linguistic instrumentality and humanistic speculativeness. It serves as an important carrier for cultivating cross-cultural communication skills and language application capabilities. Generative AI possesses features such as intelligent text generation, multi-dimensional error correction, personalized question answering, and scenario-based practical training. It has overcome the limitations of traditional translation teaching in time, space, and resources. It has become the main trend in current reform of college English translation teaching to leverage the human-AI collaboration philosophy to reconstruct the translation teaching models, and promote the deep integration of technical tools and teaching activities. This paper starts from teaching realities and academic frontier to present a comprehensive research overview, aiming to provide theoretical support and operational reference for the intelligent transformation of translation teaching in higher education.

2. Theoretical Basis for Generative AI-Empowered College English Translation Teaching

2.1 The Theory of Human-AI Collaborative Teaching

The theory of human-AI collaborative teaching is a new teaching theory that emerged from the perspective of intelligence education. It fundamentally differs from the traditional technology-assisted teaching philosophy. Its core essence lies in clearing up misunderstandings of human-AI binary opposition, and constructing a teaching ecosystem where AI, teachers, and students coexist. This theory holds that AI is not merely a teaching aid, but a collaborative entity that participates in teaching interaction, provides teaching resources, and conducts learning

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situation diagnosis in the teaching process. Teachers concentrate on core educational tasks such as teaching design, value guidance, and thinking cultivation. As the learning entities, students actively engage in inquiry-based learning [1]. The three sides build a closed-loop teaching ecosystem featuring dynamic balance and mutual collaboration. In college English translation teaching scenes, the theory of human-AI collaboration rejects the unidirectional assertion that technology replaces humans to conduct teaching, defines the boundaries of technology empowerment and the fundamental education-based positioning, and provides crucial theoretical support for the reform of translation teaching models. It ensures that the intelligent teaching reform is always rooted in the essence of education and prevents the teaching alienation caused by the abuse of technology.

2.2 The Constructivism Learning Theory

The constructivism learning theory holds that learning is not a passive process of receiving knowledge, but rather a process in which learners leverage necessary materials to proactively construct their own knowledge systems through their own efforts, and reconstruct and optimize their existing knowledge within specific contexts. The traditional translation teaching emphasize knowledge imparting over learner sovereignty. Students lack the learning scenarios for independent inquiry, comparative reflection, and practical exercises, struggling to achieve the internalization of “Learning for Transferable Application” and translation thinking. Generative AI can leverage large-scale data and algorithm models to create personalized, contextualized and interactive translation learning environment for students, assign targeted learning tasks based on students’ knowledge weakness, provide multiple versions of translations as reference, analyze grammars, elucidate cross-cultural semantics, feed various types of learning resources, and prompt students to independently complete translation comparisons, error reflection and work revision. This process aligns with the core learning logic of constructivism. It can ignite student-driven learning engagement furthest, enable them to construct a translation knowledge system autonomously and hone their practical translation capabilities and critical thinking skills.

3.The Development Status of Generative AI-Driven College English Translation Teaching

3.1 Generative AI-Teaching Integration Continues to Deepen

The widespread application of intelligent technologies has continuously deepened the integration of generative AI with college English translation teaching, and continuously expanded the application scenarios, gradually covering the whole teaching process across pre-class preparation, classroom teaching, post-class practical training, and student performance evaluation. Before class, generative AI can assist teachers in teasing out key and difficult points of teaching, and planning differentiated teaching schemes, and provide students with materials for translation and learning guidance of elementary knowledge. In class, it can leverage the intelligent interaction function to achieve real-time translation analysis, problem-solving assistance, and practice engagement so as to diversify the models of classroom teaching. After class, it can realize automatic homework grading, collection of wrong questions, and push of special training to expand the teaching scenarios. Currently, most higher education institutions have gradually integrated generative AI tools into translation teaching practice, broken through the limitations of limited traditional teaching resources and monolithic teaching methods, advanced the shift of translation teaching from static textualized teaching to dynamic intelligent interactive teaching, and improved their teaching intelligence [2].

3.2 The Roles of Teaching Entities Are Gradually Being Redefined

The deep integration of generative AI has fundamentally changed the traditional translation teaching model where teachers impart knowledge unilaterally and students passively receive it and promoted the systematic redefinition of the roles of teaching entities. Teachers has shifted their roles from knowledge imparters and assignment graders to instructional designers, learning facilitators, thinking trainers, and technology empowerment supervisors. Their work focus has gradually shifted from basic teaching toward key areas such as educational planning, value guidance, and capability development. Students have broken through the traditional rigid model of mechanical training and passive listening, and played the dominant role in translation learning. They can use

intelligent tools to conduct independent exploration, self-correction and self-improvement. As a result, their learning enthusiasm and participation have been improved observably. Artificial intelligence undertakes repetitive, foundational and auxiliary teaching tasks and establishes a collaborative and interactive relationship with teachers and students so as to establish a multi-sided collaborative teaching ecosystem.

3.3 The Demand Is Increasingly Prominent for Teaching Reform

Under the background of intelligence education development, many problems have become increasingly prominent in traditional college English translation teaching, and it is increasingly urgent to reform teaching models, and improve education quality. The demands are constantly escalating for interdisciplinary foreign language talents in society. They remain no longer confined to students' essential translation skills, but also include intelligent tool application capabilities, cross-cultural critical thinking skills, and translation innovation and optimization capabilities. The traditional teaching models are challenging to meet these new requirements for talent cultivation. The development and application of generative AI technology have provided sufficient conditions and technical support for teaching reform. The academic and educational circles generally recognize the educational functions of the human-AI collaborative teaching model. Intelligence-empowered translation teaching has become an important trend in the reform of foreign language education in higher education institutions. Under the influence of multiple factors, reconstructing the human-AI collaborative translation teaching model, improving the teaching system, and enhancing the effectiveness of education have become the inherent demands and inevitable choices for the current reform of college English translation teaching.

4. Current Challenges in the Human-AI Collaborative Teaching of College English Translation

4.1 Unsound Human-AI Collaborative Teaching Systems

At present, the integration of generative AI and college English translation teaching remains mostly confined to the stage of superficial tool application. There have not been a systematic and standardized teacher—student-human-AI collaborative teaching system, and fragmented teaching is particularly prominent. Most teaching practice merely use generative AI as an auxiliary tool for homework grading and translation generation. There is a lack of an overall design of teaching procedures, teaching content, and teaching objectives. And there have not been unified standards for teaching operation logic, operation steps, and applicable scenarios of human-AI collaboration. Furthermore, there is a lack of clear duty partition between humans and AI in current teaching practice, resulting in overinvolvement and underutilization of technology. Some classrooms overly rely on intelligent tools and neglect the educational role of teachers [3]. Besides, there are still some classes that mainly adopt traditional teaching methods. They merely superimpose technology on teaching simply and fail to deeply leverage technological efficacy. Due to lack of a systematic teaching system, the advantages of human-AI collaboration cannot be exploited truly, and the teaching quality cannot be improved fundamentally.

4.2 Insufficient Digital Literacy Among Teachers and Students

Insufficient digital literacy of teachers and students is a key factor restricting the implementation of the human-AI collaborative teaching model. As for teachers, some of them have lagging intelligent teaching philosophy. They have insufficient understanding of the functional characteristics, application logic and teaching value of generative AI, and lack the professional ability to use intelligent tools to make teaching design, implement personalized guidance and control teaching quality, struggling to achieve the deep integration of technology and teaching. As for students, most of them only master the basic operation methods of intelligent tools, but lack the ability to reasonably leverage AI tools to conduct translation research, analyze translations, and enhance thinking. Some students overly rely on AI-generated translations, develop the habit of being reluctant to think and lose their ability to independently translate and think critically. This, in turn, hinders the development of core translation skills and goes against the original intention of human-AI collaborative education.

4.3 Lagging Teaching Evaluation Mechanisms

The traditional evaluation models for college English translation teaching mainly adopt summative assessment, focus on the final translation results of students, and neglect the comprehensive evaluation of the learning process, thinking process and capability development, struggling to align with the educational characteristics of the human-AI collaborative teaching model. In the context of human-AI collaborative teaching, students' translation learning encompasses multiple phases such as autonomous knowledge exploration, human-AI interaction, revision of translations, and speculation optimization. Their key capabilities not only manifest in the quality of the final translations, but also include comprehensive capabilities in problem-solving, tool application, speculation innovation, etc. However, current evaluation mechanisms have not yet integrated with intelligent teaching evaluation factors. they lack the assessment standards for students' human-AI collaborative skills, critical thinking skills of translation, and the effectiveness of learning process. The evaluation systems are one-sided and monolithic, struggling to comprehensively and objectively reflect students' actual learning outcomes, and failing to provide precise basis for teaching improvement and personalized enhancement.

5. Pathways for Constructing the Human-AI Collaborative Model of College English Translation Teaching Driven by Generative AI

5.1 Building a Systematic Human-AI Collaborative Teaching Process

Higher education institutions should anchor in the whole process of college English translation teaching to construct a pre-class, in-class and post-class integrated human-AI collaborative teaching process so as to achieve the organic articulation between technology empowerment and teaching activities. During the pre-class phase, teachers should set stratified teaching tasks based on the teaching syllabus, use generative AI to tease out the key and difficult points in teaching, integrate the materials for translation from multiple channels, and push personalized pre-study materials, and identify the foundational weakness of students through AI-diagnosed learning situations so as to provide basis for precision teaching. In class, it is necessary to construct an "teacher-led, AI-assisted, student-centered" interactive model. Teachers focus on explaining key knowledge, inspiring translation idea and answering difficult questions. AI undertakes instant translation generation, error analysis, expansion of examples, interactive practical training, and other tasks. Human-AI cooperation is leveraged to conduct stratified teaching, scenario-based practical training, critical discussions, etc.

5.2 Strengthening Teachers' and Students' Digital Literacy Cultivation Systems

To address the deficiencies in teachers' and students' digital literacy, higher education institutions should establish a normalized and professional digital literacy training system to lay a talent foundation for the implementation of human-AI collaborative teaching. For teachers, they should establish a normalized intelligent teaching training platform to conduct training on the teaching application generative AI, human-AI collaborative teaching design, and intelligent teaching risk prevention and control in order to help teachers update their teaching philosophy, master the professional operation methods of intelligent teaching tools, and enhance their intelligent teaching design capabilities and education control capabilities. For students, they should integrate the application of intelligent translation tools, human-AI collaborative learning, and translation analysis and speculation into daily teaching to guide students to establish a sound concept of technology application, and fully understand the subservience of AI tools so as to prevent the tendency of lazy learning caused by technological dependence, cultivate their ability to use intelligent tools to conduct autonomous learning, translation improvement, and speculation innovation and achieve the organic integration of technology empowerment and capability cultivation.

5.3 Refining a Multidimensional Collaborative Teaching Evaluation Mechanism

Higher education institutions should integrate the educational characteristics of human-AI collaborative teaching and break through the limitations of traditional summative assessment methods to establish a process-oriented, diversified and comprehensive teaching evaluation system. They should optimize the evaluation

indicators, abandon the outcome-based evaluation standards, and incorporate students' autonomous translation ability, human-AI collaboration efficiency, speculation optimization of translations, classroom interaction, and the post-class learning process into the evaluation scope to achieve a comprehensive assessment of knowledge, capabilities and qualities [4]. Concurrently, they should diversify the evaluation entities, establish a multi-dimensional evaluation system that integrates teacher evaluation, intelligent system evaluation, and student self-evaluation and peer evaluation, leverage big data technology to record the data on the whole learning process of students so as to come to objective and quantitative process-based evaluation conclusions, and coordinate AI evaluation, the targeted quality evaluation by teachers and reflective self-evaluation by students to enhance the comprehensiveness and accuracy of evaluations. A sound evaluation system can help identify teaching problems and students' deficiencies accurately, and provide strong support for the continuous optimization of teaching models and the enhancement of students' personalized capabilities [5].

6. Conclusion

The rapid advancement of generative AI technology has injected new energy into the reform of college English translation teaching, and promote the shift of translation teaching from the traditional homogeneous models to an intelligence collaborative, personalized and precise model. The establishment of the human-AI collaborative teaching model effectively makes up for many deficiencies of traditional translation teaching. It can fully leverage the empowerment role of technology and the educational efficacy of education to achieve the optimized allocation of teaching resources, iterative updating of teaching models, and overall enhancement of educational effectiveness. This paper analyzes the practical dilemmas in human-AI collaborative teaching and proposes a systematic optimization pathway for human-AI collaborative teaching by teasing out the relevant theoretical basis and the development status of teaching. Moving forward, college English translation teaching reform should always adhere to educational essence, further strengthen the deep integration of technology and teaching, continuously improve the human-AI collaborative teaching system, perfect the teaching safeguard mechanism, and continuously enhance students' core translation literacy and comprehensive application capabilities to adapt to the demands for interdisciplinary foreign language talents in the new era.

References:

- [1] Jiao Li.(2026)*College English Translation Teaching Strategies under the OBE Paradigm*[J].*GuoJia TongYong YuYanWenZi JiaoXue Yu YanJiu*,6,71-73.
- [2] Qinghua Zhao.(2026)*College English Translation Teaching Reform: Dual-Core Drive of Cultural Confidence and Ecological Translation Studies*[J].*Modern English*,12,114-117.
- [3] Rui Mao.(2026)*Reconstruction and Practical Pathways of College English Translation Course Teaching Ecosystems from the Perspective of Digital-Intelligence Empowerment*[J].*Overseas English*,11,75-77.
- [4] Jiying Liu,Zheng Li.(2026)*College English Translation Teaching Practice Based on Pigai Network*[J].*Modern English*,11,115-117.
- [5] Lili Ji.(2026)*Practice of Mind Maps in College English Translation Teaching*[J].*English Teachers*,26(10),188-191.