

Innovative Paths and Practical Strategies for Translation Teaching in the Context of Educational Digital Transformation

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Abstract

With the rapid development of artificial intelligence and digital technologies, educational digitalization has become a strategic initiative to promote the high-quality development of higher education. This paper focuses on the profound impact of educational digital transformation on translation teaching, systematically sorts out the opportunities and challenges faced by translation teaching in the digital context, and explores the innovative paths of Chinese-English translation teaching from four dimensions: the innovation of teaching models, the reconstruction of teaching content, the optimization of evaluation systems, and the integration of digital and intelligent technologies. The research shows that through the integration of online and offline teaching, the combination of virtual and real teaching, the integration of technology and translation teaching models, the construction of a three-dimensional textbook system, and the improvement of a diversified evaluation mechanism, students' translation practice ability, digital literacy, and cross-cultural communication ability can be effectively improved. At the same time, combined with deep learning theory and collectivism theory, this paper puts forward practical strategies for digital and intelligent translation teaching, providing a theoretical reference and practical paradigm for cultivating compound translation talents who meet the needs of the digital era.

Keywords

Educational digitalization; Translation teaching; Teaching reform

1. Introduction

The digital transformation of education is an inevitable trend in the global development of education. Its core lies in promoting systematic changes in teaching paradigms, evaluation systems, and talent training models through the in-depth integration of digital technology and education and teaching. The report of the 20th National Congress of the Communist Party of China clearly put forward the goal of "promoting educational digitalization and building a learning society and a learning country for lifelong learning for all", elevating educational digitalization to the national strategic level (Ma, 2025). General Secretary Xi Jinping pointed out that "educational digitalization is an important breakthrough for China to open up new tracks and create new advantages in educational development", highlighting its key role in the process of educational modernization (Ma, 2025). In this context, translation teaching, as an important carrier of cross-cultural communication and international communication, its digital transformation is not only a technological innovation but also a fundamental reshaping of traditional teaching concepts and practices.

Translation activities themselves have entered a “digital revolution period”, and the impact of digital technology on translation is “lasting, extensive, and profound” (Ma, 2025). From corpus tools to artificial intelligence translation systems, from online collaboration platforms to virtual reality training scenarios, digital technology is comprehensively penetrating into all aspects of translation teaching. However, the traditional translation teaching model faces many challenges: the slow update of teaching resources, insufficient digital literacy of teachers and students, and a single evaluation system, which are difficult to meet the needs of the digital era for translation talents (Deng, 2025; Wang, 2024). Therefore, exploring the innovative paths of translation teaching in the context of educational digitalization has become an important issue to be solved in academia and industry.

Based on the research results of scholars such as Ma Huiqiong (2025), Guo Xiaolin (2023), Deng Jiayu (2025), and Wang Haoyue (2024), this paper integrates the theoretical framework and practical cases of educational digital transformation, systematically analyzes the opportunities and challenges of translation teaching in the digital era, constructs a three-dimensional reform path of “technology integration - model innovation - literacy improvement”, and puts forward specific implementation strategies to provide reference for the digital and intelligent transformation of translation teaching.

2. The Dual Impact of Educational Digitalization on Translation Teaching

2.1 Opportunities Brought by Digitalization

2.1.1 Ubiquitous and Personalized Teaching Resources

Digital technology has broken the time and space limitations of traditional teaching, making the acquisition and sharing of translation resources more convenient. Corpora, term banks, translation software (such as Trados), and online learning platforms (such as MOOCs and SPOCs) provide students with diversified learning materials to meet personalized learning needs (Ma, 2025). For example, students can compare the advantages and disadvantages of different translations through parallel corpora, use tools such as ChatGPT to assist in drafting, and then improve the quality of translations through manual proofreading, forming a “human-machine collaboration” translation process (Guo, 2023). In addition, teachers can analyze students’ learning data through intelligent platforms and push targeted learning resources to achieve “teaching based on learning” (Deng, 2025).

2.1.2 Deepened and Collaborative Teaching Interaction

Digital platforms have promoted multi-directional interaction between teachers and students, and among students. Online discussion forums and real-time collaboration tools (such as Tencent Documents) enable students to exchange translation experiences at any time, complete translation projects together, and cultivate team collaboration skills (Wang, 2024). Virtual simulation technology has built immersive learning scenarios. For example, virtual reality (VR) is used to simulate the scene of international conference translation, allowing students to exercise their on-the-spot adaptability in a simulated environment and enhance the sense of learning experience (Ma, 2025).

2.1.3 Precise and Diversified Teaching Evaluation

Traditional translation teaching evaluation mostly relies on final exams, which has the disadvantage of “focusing on results rather than processes”. Digital tools can comprehensively monitor the learning process by recording students’ learning trajectories (such as online practice duration, corpus query frequency, and the number of translation revisions). The evaluation subjects have also expanded from the single perspective of teachers to a diversified model combining student self-evaluation, peer evaluation, and machine scoring, making the evaluation more objective and fair (Guo, 2023). For example, using translation quality evaluation indicators such as BLEU to automatically score translations, and combining with teachers’ subjective evaluation of cultural connotation transmission to form comprehensive feedback (Deng, 2025).

2.1.4 Strengthening of Cross-cultural Communication Ability

In the digital context, translation teaching pays more attention to serving the national strategy of cultural communication to the outside world. By building a corpus of Chinese classic culture and carrying out translation practice projects of “telling Chinese stories well”, students can deeply understand the translation strategies of culture-loaded words and improve their cross-cultural communication ability (Ma, 2025). For example, when translating texts related to traditional Chinese festivals, students need to query the cultural background of overseas audiences with digital tools and adjust translation strategies to avoid cultural conflicts (Wang, 2024).

2.2 Challenges Brought by Digitalization

Although digitalization has brought many advantages to translation teaching, its implementation still faces the following challenges:

2.2.1 Insufficient Digital Literacy of Teachers and Students

Teachers and students have limited mastery of digital technology. Some teachers only use intelligent platforms to display courseware, failing to give full play to their interaction and data analysis functions (Deng, 2025). Students may over-rely on machine translation and ignore the importance of manual proofreading, leading to a decline in translation quality (Guo, 2023). As Ma Huiqiong (2025) pointed out, the lack of digital literacy “offsets the dividends of the digital education ecosystem”.

2.2.2 Fragmentation and Lag of Teaching Resources

Existing translation textbooks still mainly use paper materials, with slow content updates, making it difficult to cover translation cases in emerging fields (such as cross-border e-commerce and artificial intelligence) (Deng, 2025). Although online resources are rich, they lack systematic integration, and students are prone to “information overload”. In addition, the construction of professional corpora related to Chinese culture is incomplete, leading to frequent deviations in machine translation when dealing with culture-loaded words (Ma, 2025).

2.2.3 Imbalance Between Technical Dependence and Humanistic Literacy

The excessive use of digital tools may cause students to ignore the humanistic nature of translation. Although machine translation can quickly handle the literal meaning, it is difficult to convey the emotions and cultural connotations of the original text. For example, the translation of poems and idioms is often stiff (Wang, 2024). If teaching one-sidedly emphasizes technical operations, it may weaken students’ critical thinking and cross-cultural insight, violating the core goal of training translation talents (Guo, 2023).

2.2.4 Technical Limitations of the Evaluation System

Although digital evaluation improves efficiency, its indicators are still difficult to fully measure translation ability. For example, BLEU scoring focuses on the similarity between the translation and the reference translation, but cannot evaluate the logical coherence and cultural adaptability of the translation (Deng, 2025). In addition, the anonymity of online evaluation may cause some students to perfunctorily participate in mutual evaluation, affecting the authenticity of the evaluation (Ma, 2025).

3. Innovative Paths of Translation Teaching Models

3.1 Mixed Teaching Model Integrating Online and Offline

Traditional translation teaching focuses on offline classrooms, with problems such as insufficient interaction and limited resources. The online-offline integration model achieves the maximum teaching effect through a closed-loop design of “online preview before class - offline discussion in class - online expansion after class” (Ma, 2025).

Pre-class Stage: Teachers release preview tasks through platforms such as Yuketang and Xuexitong, such as translation cases, term bank links, and micro-course videos. Students learn independently and submit questions online. For example, in the “business contract translation” unit, students can learn about the fixed translation methods of legal terms through online resources in advance to form a preliminary understanding (Deng, 2025).

In-class Stage: Teachers focus on the common problems in students’ online feedback and organize case analysis and group discussions. For example, comparing the differences between machine translation and human translation in handling long and complex sentences, and guiding students to summarize post-editing skills (Guo, 2023). Real-time voting and random roll-calling can also be introduced in the classroom to improve students’ participation (Wang, 2024).

After-class Stage: Students submit translation assignments through online platforms. Teachers use intelligent correction tools for preliminary review, focusing on term consistency and grammatical errors, and then provide personalized feedback combined with manual comments. Students can continue discussions through online forums to consolidate learning results (Ma, 2025).

The advantage of this model is that it not only retains the depth of offline interaction but also gives play to the breadth of online resources, which is especially suitable for the phased training of translation skills (Wang, 2024).

3.2 Immersive Teaching Model Combining Virtual and Real

Technologies such as virtual reality (VR) and augmented reality (AR) have built simulated scenarios for translation teaching, enabling students to improve their application ability in a context close to reality (Guo, 2023).

Scenario-based Training: By simulating scenes such as international business negotiations and press conferences through VR, students need to translate dialogue content in real-time, and the system provides immediate feedback according to their performance, such as prompting inappropriate words or cultural taboos (Ma, 2025). For example, in the simulated “Chinese Intangible Cultural Heritage Exhibition” translation, students need to explain cultural concepts such as “shadow puppetry” and “paper-cutting” to virtual foreign audiences, exercising their cross-cultural expression ability (Deng, 2025).

Project-based Learning: Carry out cooperative translation projects relying on virtual platforms, such as jointly translating a Chinese science and technology news. Students are divided into groups to be responsible for term unification, translation proofreading, format typesetting, etc., synchronize progress through online collaboration tools, and teachers provide real-time guidance through background monitoring (Wang, 2024). This model not only improves translation efficiency but also cultivates students’ project management ability.

Cross-school and Cross-cultural Cooperation: Use virtual classrooms to connect students from domestic and foreign universities and carry out joint translation practices. For example, Chinese students and native English speakers cooperate to translate documents related to the “Belt and Road Initiative”. Both parties are responsible for Chinese understanding and English expression respectively, and solve translation problems caused by cultural differences through online discussions (Guo, 2023).

3.3 Digital and Intelligent Teaching Model Integrating Technology and Translation

The digital and intelligent teaching model emphasizes the in-depth integration of translation skills and digital technology, cultivating students’ “technology + language” compound ability (Guo, 2023).

Systematic Teaching of Translation Technology Tools: Incorporate computer-aided translation (CAT) tools such as Trados and MemoQ into the curriculum system, guiding students to master corpus construction, term management, translation alignment, and other functions (Ma, 2025). For example, through the “translation memory” function of Trados, students can quickly call up historical translations, ensure term consistency, and improve translation efficiency (Deng, 2025).

Critical Application of Artificial Intelligence Translation: Teaching needs to guide students to correctly view the advantages and disadvantages of machine translation. For example, comparing the differences between Baidu Translation and human translation in the translation of “traditional Chinese medicine terms”, analyzing the limitations of machine translation (such as the lack of cultural connotation), and cultivating students’ post-editing ability (Wang, 2024). Guo (2023) pointed out that the core of digital and intelligent teaching is “human-machine collaboration” rather than “machine replacement”.

Application of Big Data Analysis in Translation: By analyzing industry data in the translation market (such as the “2023 China Translation and Language Service Industry Development Report”), students can understand the translation needs in hot fields (such as cross-border e-commerce and information technology) and improve their translation ability in professional fields in a targeted manner (Deng, 2025). Teachers can adjust teaching content based on data analysis results to enhance the practicality of the curriculum.

4. Reconstruction of Teaching Content and Textbook System

4.1 Construction of Three-Dimensional Textbooks

Traditional paper textbooks can no longer meet the needs of digital teaching, so it is necessary to build a three-dimensional system of “paper textbooks + digital resources + dynamic updates” (Deng, 2025).

Selection and Supplement of Core Textbooks: Based on classic textbooks (such as “English-Chinese Translation Course”), supplement digital cases in business, law, medicine, and other fields to form a “basic + professional” content structure. For example, in the “scientific and technological translation” unit, add the latest terms and translation examples of 5G technology and artificial intelligence (Wang, 2024).

Co-construction and Sharing of Dynamic Resource Banks: Teachers and students jointly participate in the collection and sorting of translation resources, and establish an online database containing bilingual parallel texts, machine

translation comparisons, and cultural background materials. For example, students are divided into groups to sort out texts related to “traditional Chinese festivals” and their English translations, upload them to the platform for the whole class to use, and teachers are responsible for review and supplementation (Ma, 2025).

Integration of Multimedia Resources: Introduce multi-modal materials such as videos, audios, and animations to enhance the interest and practicality of textbooks. For example, show the achievements of “China’s poverty alleviation” through documentary clips, let students try subtitle translation, and understand the social and cultural context behind it (Deng, 2025).

4.2 Era and Practicality of Teaching Content

Under the digital background, the content of translation teaching needs to be closely connected with industry needs, highlighting practicality and era (Wang, 2024).

Integration of Industry Hotspots: Combine the trends of the translation market and add special topics such as “cross-border e-commerce copy translation” and “artificial intelligence ethics text translation”. For example, analyze the language characteristics of product descriptions on Amazon and guide students to master “marketing-oriented” translation strategies (Deng, 2025).

Strengthening of Cultural Communication Content: Increase content related to the external communication of Chinese culture, such as translation practice of “Chinese stories”, “intangible cultural heritage”, and “current political discourse”. By comparing the English translation of “Xi Jinping: The Governance of China” with the original text, learn the translation skills of political discourse and improve the international communication ability of national discourse (Ma, 2025).

Design of Project-based Practical Content: With real translation projects as the carrier, let students participate in the complete translation process. For example, cooperate with local enterprises to translate product manuals or promotional materials. Students need to go through the links of receiving orders, analyzing needs, translating, proofreading, and delivering to accumulate practical experience (Wang, 2024).

5. Optimization of Teaching Evaluation System

5.1 Construction of Diversified Evaluation Subjects

Break the single evaluation model of teachers and integrate multi-subject participation:

Student Self-evaluation and Peer Evaluation: After submitting translation assignments through online platforms, students first conduct self-reflection (such as analyzing the gap between their translations and reference translations), and then participate in group mutual evaluation and put forward revision suggestions (Deng, 2025). This way cultivates students' critical thinking and evaluation ability.

Machine-assisted Evaluation: Use translation quality evaluation tools (such as MQM and BLEU) to initially score the accuracy and fluency of translations, providing reference for teachers' evaluation (Guo, 2023). However, it should be noted that machine evaluation cannot replace manual judgment on cultural connotation and context adaptability.

Industry Expert Evaluation: Invite senior translators from translation companies to participate in the evaluation and put forward improvement suggestions from a professional perspective. For example, comment on students' translated business contracts, emphasizing the preciseness and format norms of legal terms (Wang, 2024).

5.2 Combination of Formative Evaluation and Summative Evaluation

Formative Evaluation: Comprehensively evaluate students' learning attitude and progress trajectory by recording data such as online learning duration, corpus use frequency, group cooperation contribution, and the number of translation revisions (Ma, 2025). For example, in the “translation project” course, formative evaluation can account for 60%, including project planning, mid-term report, final draft quality, and other dimensions (Deng, 2025).

Summative Assessment: Adopt “practical” assessment methods, such as having students complete the translation of a real enterprise brochure or participate in the “CATTI Cup National Translation Competition”, to test learning outcomes through actual achievements (Wang, 2024). Summative assessment should focus on evaluating students' comprehensive abilities rather than merely language conversion skills.

6. Conclusion

The digital transformation of education has brought unprecedented opportunities for reform to translation teaching, along with higher requirements. By innovating teaching models (integration of online and offline, combination of virtual and real, integration of technology and translation), reconstructing teaching content (three-dimensional textbooks, era-specific topics), and optimizing evaluation systems (diversified subjects, process-oriented assessment), the quality of translation teaching can be effectively improved, and compound talents adapting to the needs of the digital era can be cultivated.

However, the digital and intelligent transformation of translation teaching still needs to pay attention to the following issues: first, balance the application of technology and the cultivation of humanistic literacy to avoid “emphasizing technology over ability”; second, strengthen the training of teachers’ and students’ digital literacy to enhance the initiative and professionalism of technology application; third, promote the co-construction and sharing of translation resources to solve the problem of lagging corpus construction. Future research can further explore the path of in-depth integration of artificial intelligence and translation teaching, such as developing personalized translation tutoring systems using natural language processing technology, or predicting the demand of the translation market through big data analysis to provide a more accurate direction for talent cultivation.

The digitalization of education is a systematic project that requires the joint participation of universities, teachers, students, and industries. Only through continuous innovation can translation teaching radiate new vitality in the wave of digitalization, and cultivate more high-quality translation talents for the international communication of Chinese culture and international exchanges and cooperation.

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