

Research on the Transformation of Higher Vocational Foreign Language Programs in China in the Context of Artificial Intelligence——Pathways and Practices

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Abstract: The rapid advancement of artificial intelligence has triggered significant transformations in the educational sector in China, with foreign language programs entering a critical period of transition. Given the advanced capabilities of AI and the current challenges confronting foreign language education, particularly in higher vocational institutions, this paper focuses on the transformation pathways for China's higher vocational foreign language programs within the AI context. It analyses practical approaches to transformation from macro, mesoscopic, and micro levels, discusses potential issues that AI may introduce to higher vocational foreign language education, and proposes corresponding coping strategies. This paper concludes that AI-empowered program transformation is well suited to the current and near-future context of higher vocational foreign language education.

1. Introduction

The rapid development of generative artificial intelligence technologies, exemplified by ChatGPT, has ignited a new wave of the AI revolution while simultaneously subjecting China's education sector to unprecedented changes. In April 2025, China's Ministry of Education and eight other ministries jointly issued the Opinions on Accelerating the Digitalization of Education ^[1], which explicitly calls for optimizing higher education disciplinary offerings in response to the digital economy and future industrial development, dynamically adjusting vocational education programs, empowering deep industry-education integration, and serving cultivation of highly skilled talent. This top-level design charts a clear direction for the digital transformation of China's higher education, particularly for foreign language programs that have long focused on cultivating "instrumental" language skills. It also provides direct guidance for higher vocational foreign language programs that train high-skilled language professionals for the frontlines of production and services.

Over the past two decades, higher vocational foreign language education in China experienced a period of remarkable growth, with over 400 vocational institutions once offering Business English programs. In recent years, however, the development of AI has delivered a direct, visible, and

powerful impact on foreign language programs and traditional teaching models. The most striking effect is the substitution of “instrumental” skill training, such as basic literacy tasks, standardized translation and other low-value language conversion skills are being progressively replaced by efficient AI tools. Relevant surveys indicate that in 2025, numerous universities nationwide abolished undergraduate foreign language programs, and the scale of higher vocational foreign language offerings has contracted sharply. According to China’s Ministry of Education’s 2025 higher vocational program registration and approval results, 52 Business English programs and 26 Applied English programs were discontinued ^[2]. Furthermore, in 2025, projects delivered via “fully machine translation” or “machine translation plus post-editing” accounted for over 66% of total projects ^[3], signalling a continued contraction in demand for traditional translation roles. The underlying trend is not simply the phasing out of “low-value language skills” of foreign language learners but rather a growing demand for “high-value composite competencies.”

These developments pose serious questions for China’s foreign language education: Why has AI exerted such a profound impact on traditional foreign language programs, particularly those in vocational institutions? What conceptual and institutional pain points hinder the transformation process? How can these challenges be overcome to achieve “high-value composite competencies” in higher vocational foreign language education?

This paper aims to address these questions by clarifying the theoretical starting point for transforming foreign language programs in vocational institutions within the dual context of industrial upgrading and rapid AI advancement. It seeks to articulate the logic underlying this transformation, construct an analytical framework, outline practical directions, and establish pathways to develop talent cultivation models capable of meeting the multifaceted challenges posed by structural change.

2. The Impact of Artificial Intelligence on China’s Vocational College Foreign Language Programs

2.1. The Advanced Capabilities of Artificial Intelligence

AI is characterized by intelligence, learning capacity, efficiency, collaboration, adaptability, and interactivity ^[4]. Its impact on foreign language teaching transcends a mere upgrade in tools; it fundamentally restructures the underlying pedagogical logic. This transformation challenges two long-held premises: that “language acquisition necessitates interpersonal interaction” and that “the learning process must follow a linear path.” The manifestations can be examined from the following dimensions:

In listening and speaking, AI serves as a conversational coach and tutor, providing real-time feedback on learners’ pronunciation, word choice, syntax, and logical coherence, along with multidimensional analysis. AI can create diverse scenarios and assume any role, patiently engaging learners in low-pressure, highly immersive, ubiquitous conversations. In writing, AI embeds feedback throughout the entire process, offering immediate guidance and corrections on organization, coherence, grammar, syntax, and vocabulary. Learners can also leverage AI to instantly shift styles or genres, expanding, condensing, or rewriting the same text—an achievement beyond the reach of conventional teaching.

Learning materials can also be personalized. AI not only upgrades search engine functionality—allowing learners to access vast resources through well-crafted queries—but can also dynamically generate adapted content based on their proficiency and interests, automatically creating vocabulary lists, exercises, and reading comprehension tasks. In assessment, AI enables precise diagnostics based on error patterns, identifies weaknesses, and generates targeted drills. It also facilitates fully data-driven student portfolio assessments, yielding meaningful washback effects. In audio-visual

and translation, real-time subtitling and simultaneous interpretation functions significantly diminish the value of intensive traditional translation training, while substantively replacing human translator roles. This, in turn, prompts students to question the “necessity of foreign language learning”, exacerbates concerns about employment prospects, and further contributes to the structural decline of foreign language programs..

2.2. Comprehensive Challenges from Structural Industrial Transformation

Structural industrial transformation has also generated multifaceted shocks and challenges for vocational college foreign language programs. Currently, several structural issues plague higher vocational foreign language teaching. First, there is a horizontal disconnection between curriculum supply and industrial demand. Course content tends to be generic and outdated, failing to effectively align with the specific, granular work scenarios of regional pillar industries, thus preventing students from directly transferring what they learn to actual job roles. Meanwhile, a singular disciplinary knowledge framework and language-skill training system remain detached from the technological awareness and application capabilities required in the digital era, leaving students difficult in adapting to digital economic trends. The root of this problem lies in teachers’ knowledge structures and professional mindset, which remain anchored in traditional language disciplines, meaning that the “talent products” institutions graduate do not genuinely respond to enterprise needs. Second, there is a vertical gap between teaching capacity supply and technological requirements, such as AI. Because teaching methods have failed to keep pace with the evolution of technological productivity, most of the higher vocational foreign language classrooms still rely on teacher-led knowledge transmission and accuracy-focused language drills. AI has not yet been systematically embedded as a core productive element throughout the teaching process, widening the gap between teaching effectiveness and contemporary demands. Third, the evaluation system, namely, the quality assurance mechanism on the talent supply side, struggles to effectively measure and predict the practical value of learning outcomes in real job settings. Current assessments, dominated by certificate acquisition and exam scores, fail adequately to demonstrate to employers students’ problem-solving abilities in complex industrial communication contexts, thereby weakening the effective linkage between talent cultivation and market demand. These three dimensions of misalignment inevitably place higher vocational foreign language graduates at a significant disadvantage in the job market, prompting considerable scepticism about the *raison d’être* of these programs within society.

Therefore, AI’s reshaping of foreign language education, especially at the higher vocational level, is not a technological overlay but a systemic restructuring. Its effects permeate pedagogy, curriculum content, assessment mechanisms, and the very rationale for the discipline’s existence. There is an urgent need for the academic community to re-examine the intrinsic value of vocational foreign language education and to chart the direction and practical pathways for program transformation.

3. Theoretical Starting Point and Framework for Program Transformation

The Educational Ecology Theory, proposed by American educational scholar Urie Bronfenbrenner in 1979, conceptualizes education as a dynamic ecosystem comprising “macro-, exterior, mesoscopic, and microsystems”^[5], wherein systems interact and constrain one another, and change at any level requires consideration of systemic synergy. For the transformation of higher vocational foreign language programs, this theory offers core value by providing a systematic analytical framework for digitally empowering the discipline:

3.1. Macro System

It corresponds to national education policies, social needs, and the technological environment, guiding the direction of program transformation. The exterior system corresponds to institutional governance structures, resource allocation, and school-enterprise collaboration mechanisms, providing external support.

3.2. Mesoscopic System

It corresponds to program-level talent cultivation plans, curriculum frameworks, and teaching-research mechanisms, such as “Foreign Language+” disciplinary configurations, “dual-subject” collaborative education models, micro-credential programs, and “1+X+Y (Core + Advanced + Extended)” curriculum architectures. This constitutes the core vehicle for disciplinary transformation.

3.3. Micro System

It corresponds to teachers’ instructional practices and students’ learning approaches, such as in-class AI applications, the evolution of teacher roles, and addressing AI-related issues. This represents the implementation arena where transformation materializes.

4. Pathways and Practices for Program Transformation

4.1. Macro Level and Exterior system Support

At the macro level and through exterior system support, the transformation of higher vocational foreign language programs should serve the objectives such as “understanding the world and better cultural exchange between China and other countries”. Institutions should proactively engage with resource-optimized platforms at all levels. For example, Guangdong University of Foreign Studies launched its “Deep Cloud” AI education platform in 2025 to deeply integrate AI with the entirety of teaching and learning ^[6]. Professor teams, primarily from the English faculty, have been actively exploring the application of virtual simulation technologies in humanities courses to achieve an organic synthesis of “technology-teaching-education.” Through this platform, teachers can access AI-generated lesson plans, while students engage in immersive cross-cultural communication exercises. Additionally, language-focused virtual simulation training bases on the National Smart Education Platform provide resource-sharing support across institutions, effectively narrowing regional resource disparities.

4.2. Mesoscopic Level

At the mesoscopic level, foreign language programs must be built upon industrial value chains. This entails thorough analysis of industries such as cross-border e-commerce and international trade to identify specific occupational roles, distil competency requirements and relevant technical domains, and systematically integrate these competency requirements into disciplinary logic, project logic, and curriculum logic. Consequently, the training objective should be redefined: shifting from cultivating language-proficient English practitioners to developing cross-border business communication specialists—versatile talents who are proficient in foreign languages, well-versed in international rules, skilled in digital tools, culturally perceptive, and capable of managing full-process language services and communication in digital trade. Under this objective, a

composite talent cultivation system transitioning from “Foreign Language” to “Foreign Language +” should be established, embedding foreign language competencies within program clusters, such as “International Business + Cross-Cultural Communication” and “Cross-Border E-Commerce + Multilingual Operations,” forming curriculum modules where “foreign language empowers the discipline.” Concurrently, “micro-credential” and “skill badge” certifications should be promoted. In partnership with leading enterprises, micro-certificate programs such as “Cross-Border Livestream Operations” and “Cross-Cultural Project Management” can be developed, achieving a “one course, one certificate” model. Furthermore, “industry-project-embedded” teaching should be implemented: enterprises are invited into the classroom to co-develop portions of the curriculum, bringing real projects where students complete and deliver outcomes under the guidance of both teachers and industry mentors.

Another critical issue at the mesoscopic level is constructing the curriculum framework and embedding AI throughout the entire teaching process. The curriculum can be organized according to a “Core + Advanced + Extended” structure. Core courses comprise foundational language programs and introductory professional courses (e.g., English listening, speaking, reading, and writing; Business English; Fundamentals of Economics). Advanced courses encompass platform-based courses delivered in a foreign language (e.g., Cross-Cultural Communication, Smart Office and Data Analytics). Extended courses consist of specialized, project-based courses developed in partnership with enterprises (e.g., Cross-Border E-Commerce Practices, Smart Translation and Localization Practices, Cross-Border Livestream Operations Projects).

For embedding AI across the full teaching spectrum, the “1+X+Y” model offers a viable reference. “1” denotes foundational AI technologies (e.g., using AI for writing and speaking feedback). “X” represents advanced AI applications (e.g., employing AI to assume roles in case-based teaching within Cross-Cultural Communication courses). “Y” encompasses AI-assisted, real-scenario project-based learning. For example, for the translation track, Smart Translation and Localization Practices, where students complete language service projects using AI and conduct manual verification; for the cross-border e-commerce track, Smart Product Selection and Supply Chain Management, where students learn to perform product selection, supply chain management, and after-sales tasks through a combination of AI and human effort. This model operates within a fully foreign-language instructional environment, with its core principle being to position AI as a “collaborator” in teaching, not a “replacement.”

4.3. Micro Level

At the micro level, a “dual-teacher, three-capability” faculty development system should be established. “Dual-teacher” refers to the combination of on-campus faculty and enterprise mentors. “Three capabilities” encompass: (1) capacity to understand industry discourse, (2) proficiency in leveraging AI, and (3) competence in cross-cultural instructional design. To cultivate teachers’ ability to grasp industry discourse, “school-enterprise collaboration” is the fundamental pathway. Institutions can set up “teacher industry research stations,” encouraging teachers to engage in regular enterprise internships, participate in projects, and maintain “content freshness” and “scenario awareness” aligned with industry developments. Teacher AI proficiency is closely linked to digital literacy among foreign language educators. Existing research generally agrees that enhancing the digital literacy of university foreign language teachers is the micro-level core of program transformation; teachers’ digital literacy directly determines the depth of technology-pedagogy integration and, consequently, the actual effectiveness of transformation. Mishra and Koehler’s TPACK (Technological Pedagogical Content Knowledge) theoretical framework emphasizes that teachers should achieve continuous balance and restructuring within a dynamic

zone where technological knowledge (TK), pedagogical knowledge (PK), and content knowledge (CK) deeply interact ^[7]. In the foreign language teaching-learning context, teachers' digital literacy comprises three core dimensions. Firstly, "discipline-specific digital teaching awareness characterized by language-technology symbiosis," wherein teachers recognize technology not as an "auxiliary tool" but as an "endogenous element of disciplinary restructuring"; Secondly, "human-AI collaborative foreign language digital teaching reconstruction capability," namely, the ability to design personalized instruction and redesign classroom processes using AI tools; Thirdly, "digital ethics and social responsibility in cross-cultural contexts". Teachers guide students to use AI tools appropriately, discern the authenticity of AI-generated content and avoid over-reliance on technology.

To enhance teachers' digital literacy and AI competencies, a tiered and differentiated training system can be adopted. Novice teachers focus on basic operational skills with AI tools, such as using AI software and intelligent teaching platforms. Experienced teachers strengthen technology-pedagogy integrated design capabilities, such as designing project-based learning and cross-cultural communication scenarios using AI. Expert teachers participate in digital resource development and standard setting, including compiling AI-assisted teaching materials and contributing to the design of digital teaching standards within the field.

At the micro level, designing instructional tasks using AI is crucial. Such tasks should emphasize problem analysis and resolution, reflecting comprehensiveness rather than being overly simplistic. Learning tasks are organically integrated with occupational tasks, facilitating a transition from "course learning" to "project-based training." The "scenario-based, modular, certification-oriented" teaching model can be introduced: teaching modules are designed, following the typical workflows of students' future work, with each module corresponding to a verifiable job competency. Additionally, "online + offline" blended training platforms should be promoted: construct "AI language training pods" that simulate real cross-border work environments, supporting students in practicing multilingual meetings, technical translation, cross-cultural content creation, and other exercises.

AI undoubtedly is a double-edged sword as all technologies. As it can be deeply integrated with teaching, it also brings unavoidable practical challenges. In the process of leveraging AI, students may struggle to distinguish genuine knowledge from plausible but unverified generated content, potentially accepting false or misleading information as fact without questioning its validity. Many students become overly reliant on generative AI, effortlessly producing English essays, speech drafts, and the like, which undermines their critical thinking and problem-solving abilities. The quick answers provided by AI may satisfy students with superficial understanding, causing them to neglect deeper inquiry. Moreover, although AI can simulate dialogue, it cannot fully replace genuine teacher-student and peer-to-peer interaction, which is detrimental to developing students' practical communication skills. To address these issues, concrete measures can be implemented in teaching. For instance, AI provides students with environments for listening, speaking, reading, and writing, offering tailored suggestions based on their performance. In English writing, generative AI can serve as a virtual tutor, assisting students in completing writing tasks by offering ideas, structuring advice, and relevant vocabulary. For a given topic, students can use AI to access diverse perspectives and broaden their thinking. For a specific essay, AI can handle objective metrics such as grammar and vocabulary, while teachers focus on emotional expression, creativity, and complex contextual understanding. Students can also be guided to analyse their own and their peers' essays, summarizing strengths and weaknesses. In English reading, AI can search and generate various reading materials and design different types of questions; however, teachers must evaluate the reliability of these materials and the appropriateness and correctness of the questions. Teachers should also encourage students to think critically about what they read, analysing and interpreting

the information presented to them.

The transformation of teachers' roles extends beyond embedding AI in instruction and addressing AI-induced issues. Teachers work focuses on areas where AI cannot substitute human educators, such as cultivating students' deep cross-cultural understanding by perceiving nuances, comprehending cultural taboos, and engaging in complex emotional resonance; fostering critical thinking and logic. Teachers also guide students to distinguish truth from falsehood in the vast information AI provides and constructing persuasive arguments. Even further, teachers guide students in authentic cross-cultural leadership and collaboration such as building trust and resolving conflicts within multicultural teams, all of which rely on human insight rather than mere language skills. Consequently, teachers' roles must evolve from transmitters of language knowledge and drill instructors to designers of learning experiences, guides of cross-cultural thinking, and builders of human connections that AI cannot replicate.

5. Conclusions

Artificial intelligence has imposed new demands on China's higher vocational foreign language education, making the transformation of foreign language programs an inevitable imperative. The pathways for transformation are anchored at the macro level, planned at the mesoscopic level and implemented at the micro level. It is essential to develop a "dual-qualified" faculty team with strong digital literacy, comprising both full-time and part-time members, in order to maintain the program's dynamism. AI is to reshape instructional tasks so that it fully serves pedagogical purposes and empowers program development and enhancement. During this transformation process, challenges such as teacher resistance to change, obstacles to bringing external enterprise experts into the classroom, superficial industry-education integration, and the negative impacts of AI technology continue to afflict various higher vocational foreign language programs. Addressing these issues will require concerted efforts from society, institutional leadership, program administrators, and teachers alike. In this new landscape, higher vocational foreign language programs must seek opportunities amid crisis, convert difficulties into motivation, and cultivate a greater number of high-calibre talents.

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