

# Training Program for Interdisciplinary Talent in “Artificial Intelligence + English” under the University–Enterprise Cooperation Model

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**Abstract:** With the rapid development of artificial intelligence technology, society's demand for compound talents who are both proficient in English and capable of applying AI technology is increasingly urgent. However, current foreign language education in universities faces practical difficulties, such as a disconnect between talent cultivation and market demand and insufficient interdisciplinary integration. Based on the theory of school-enterprise collaborative education, this paper explores the necessity and feasibility of cultivating 'AI-English' compound talents. The study proposes that by constructing a three-in-one curriculum system of 'language skills, technical literacy, and industry application,' building a blended practical platform for industry-education integration, and establishing a dynamic and diversified evaluation mechanism, a new model of talent cultivation featuring deep school-enterprise cooperation can be formed. The study shows that this approach can effectively enhance students' language application ability, technical thinking ability, and interdisciplinary innovation ability, providing a referable path for the reform of foreign language education in the new era.

**Keywords:** University-enterprise Cooperation; AI-English; Compound Talents; Industry-education Integration; Cultivation Plan

## 1. Research Background

Since the 21st century, a new round of technological revolution represented by artificial intelligence is profoundly changing human production and lifestyle. In the field of language services, breakthroughs in machine translation, intelligent speech recognition, natural language processing, and other technologies pose entirely new challenges for the cultivation of foreign language talents. The traditional model of training English majors has long focused on the teaching of language and literature knowledge and the training of listening, speaking, reading, writing, and translation skills. This single knowledge structure and ability system can no longer meet the diverse needs of the intelligent era.

Meanwhile, at the national strategic level, the call for compound talents is becoming increasingly strong. The "China Education Modernization 2035" clearly proposes to promote the "deep integration of artificial intelligence and education" and to cultivate a large number of high-quality talents with innovation capabilities and interdisciplinary backgrounds. Against the backdrop of the construction of "new liberal arts," the foreign language discipline faces a historical opportunity to transform from a "tool-oriented" to one that emphasizes both humanity and technology.

However, universities generally encounter bottlenecks in cultivating 'AI-English' compound talents, such as weak faculty resources, outdated curriculum systems, and lack of practical platforms. It is difficult to break through disciplinary barriers relying solely on universities, whereas enterprises, as the forefront of technology application, possess rich industry resources, real application scenarios, and advanced technological platforms. Therefore, exploring talent cultivation plans under the school-enterprise cooperation model has become a key breakthrough to address the current difficulties.

## **2. Literature Review**

### ***2.1 Research on the Training of Compound Foreign Language Talents***

With the deepening of the construction of new liberal arts, the research on the training of compound foreign language talents has shown a trend of deepening from macro concepts to micro mechanisms. Wen Qiufang (2024) pointed out that foreign language talents in the new era must have a four-dimensional structure of "language ability, critical thinking ability, cross-cultural ability, and learning ability", emphasizing that technical literacy should be embedded in the whole process of training as an important part of interdisciplinary ability [1]. Wang Xuemei and Zhao Shuang (2025) found through an empirical survey of foreign language majors in 36 universities that the market demand for single-language skilled talents is declining year by year, and the salary premium effect of "foreign language X" is significant, among which "foreign language artificial intelligence" is listed as one of the fastest growing directions in demand [2].

In terms of training model innovation, Shu Dingfang and Chen Xinren (2023) put forward the concept of "interdisciplinary curriculum group", advocating that foreign language majors should break down disciplinary barriers and form an interdisciplinary teaching community with computer science and data science. Dai Weidong et al [3]. (2024) further pointed out that the key to cultivating compound talents lies in building a "diverse, collaborative, dynamic and open" curriculum ecosystem, so that students can choose personalized learning paths such as technical, management or international communication according to their interests and career plans while mastering the core language skills [4].

### ***2.2 Research on school-enterprise cooperation and integration of industry and education***

In recent years, the integration of industry and education has accelerated its penetration from engineering education to the field of humanities and social sciences, forming a new paradigm of school-enterprise cooperation research with liberal arts characteristics. Jiang Dayuan and Wu Quanquan (2023) emphasized the special significance of "coupling learning and work situations" to the cultivation of applied talents in liberal arts when updating the theory of "systematization of work process", and believed that the project-based operation model of the language service industry provides a natural soil for school-enterprise collaborative education [5].

In view of the integration of industry and education in foreign language disciplines, Cui Qiliang and Li Bing (2024) built a "three-level and five-dimensional" school-enterprise cooperation quality evaluation system based on a survey of 50 leading language service enterprises in China [6]. Liu Ping and Zhang Jie (2025) take the Master of Translation Professional Degree (MTI) as an example to propose a new model of "dual-subject, full-process, and modular" school-enterprise cooperation, which puts enterprise needs forward to all aspects of curriculum development, practical teaching, and quality evaluation [7].

It is worth noting that the latest research by Hu Kaibao and Han Ziman (2026) focuses on the subdivision of "artificial intelligence language services", pointing out that school-enterprise cooperation has been upgraded from the traditional construction of internship bases to the trinity model of "joint technology research and development, customized talent training, and collaborative formulation of standards", providing a new paradigm reference for the integration of industry and education in foreign language disciplines [8].

### ***2.3 Research on "Artificial Intelligence + Education"***

The deep integration of artificial intelligence and education has been a core topic in the field of educational technology in recent years. Zhu Zhiting and Hu Jiao (2024) emphasize that artificial intelligence has evolved from a teaching aid to a key variable in reshaping the educational structure when constructing the theory of smart education ecology, and proposed that "human-machine collaborative education" will become the mainstream form in the future. In the field of language education [9], Chen Jianlin and Zheng Xinmin (2023) systematically sorted out seven application scenarios of artificial intelligence-enabled foreign language teaching, including intelligent writing feedback, adaptive vocabulary learning, virtual speaking partners, etc., believing that technology embedding provides unprecedented possibilities for personalized teaching [10].

Regarding the cultivation of artificial intelligence literacy, Li Yan and Sun Zhong (2025) proposed that "artificial intelligence literacy education" should become a compulsory content of higher education, and decompose it into four dimensions: "technical cognition, application ability, ethical awareness, and innovative thinking"[11]. In the context of English majors, Wang Hua and Yang Jing (2026) found through quasi-experimental research that systematic artificial intelligence literacy courses not only do not weaken the cultivation of language ability, but can significantly improve students' information literacy and logical thinking ability, forming a virtuous circle of "two-way empowerment of language and technology"[12].

From the perspective of talent training, Gu Yueguo and Liang Maocheng (2024) proposed the curriculum design concept of "computational linguistics + corpus linguistics + cognitive linguistics" when discussing the construction of the discipline of "language intelligence", believing that artificial intelligence technology should be integrated into linguistics education as a methodology rather than a simple tool [13]. This view provides an important curriculum theory foundation for the cultivation of "artificial intelligence + English" compound talents.

### ***2.4 Research and Evaluation***

However, the existing research still has the following shortcomings: First, the systematic design research of the multi-language talent training program is not sufficient, and most of the studies are at the level of curriculum addition or module superposition, and there is a lack of systematic reconstruction of training objectives, curriculum system, practice platform, and evaluation mechanism. Second, the research on the micro-operation mechanism of school-enterprise cooperation in the specific field of "artificial intelligence + English" is relatively weak, and the path of enterprise participation in training program design, course content co-construction, and learning achievement certification is insufficient. Third, most of the existing studies use static descriptions or case studies, and lack action studies and effect tests based on real culture processes. Therefore, this study aims to make up for the above shortcomings, and test the implementation effect of the training program through action research on the basis of systematic construction of the training program, in order to

provide an operable and replicable practice plan for the training of "artificial intelligence + English" compound talents.

### **3. Research Content**

This study focuses on systematically constructing a training program for compound talents in "Artificial Intelligence and English" under the school-enterprise cooperation model, mainly including the following four aspects:

#### ***3.1 Analysis of Competency Requirements***

Based on in-depth research on artificial intelligence language service enterprises, multinational technology companies, and educational technology institutions, the core competency structure that "Artificial Intelligence and English" compound talents should possess is clarified. Specifically, it includes three dimensions: first, advanced language proficiency, including intercultural communication, advanced translation and writing, and language data analysis capabilities; second, AI technical literacy, including fundamentals of natural language processing, basic principles of machine learning, and the ability to develop and apply intelligent tools; third, industry application capabilities, including language data annotation, intelligent product operation, and human-machine collaboration skills.

#### ***3.2 Curriculum System Design***

Following the modular curriculum design concept of "shared at the foundational level, separated at the intermediate level, and selectable at the advanced level," a course matrix of "core language courses, technical foundation courses, and integrated application courses" is designed. Among them, core language courses consolidate students' basic language skills; technical foundation courses introduce computer-related courses such as AI introduction, Python programming, and natural language processing; integrated application courses develop interdisciplinary courses such as language intelligent processing, computer-assisted translation, and corpus linguistics.

#### ***3.3 Innovation in Evaluation Mechanisms***

A diversified evaluation mechanism combining "process evaluation, outcome evaluation, and added-value evaluation" is established. Process evaluation focuses on students' performance in project practice and team collaboration; outcome evaluation examines students' knowledge mastery and competency achievement; added-value evaluation focuses on the extent of students' skill improvement compared to their entry level. Enterprise mentors are involved in the evaluation to ensure that the standards align with industry needs.

### **4. Research Methods**

#### ***4.1 Literature Review Method***

Systematically review domestic and international literature on the cultivation of compound foreign language talents, school-enterprise cooperative education, and the application of artificial intelligence in education, in order to understand the current research status, clarify the theoretical foundation, and provide academic support for the design of the training program.

#### ***4.2 Case Study Method***

Select three representative universities (one foreign language university, one science and engineering university, and one comprehensive university) as cases to conduct an in-depth analysis of their exploratory practices in cultivating interdisciplinary talents in "Artificial Intelligence + English," summarizing successful experiences and existing problems.

**4.3 Interview Method**

Conduct semi-structured interviews with 15 senior executives and technical leaders from artificial intelligence companies and language service companies, as well as 10 key faculty members from university foreign language and computer science departments, to gain a deep understanding of industry requirements for compound talents' competencies, and the challenges and breakthroughs in school-enterprise cooperation.

**4.4 Action Research Method**

Carry out one-year action research in the English major (Artificial Intelligence direction) at a certain university. The researcher participates as a teaching participant, implementing the training program in real teaching contexts, continuously improving the program design through observation, reflection, and adjustment.

**5. Research Results**

Through one year of action research and follow-up surveys with cooperative enterprises, the study achieved the following main results:

**5.1 Constructed a "Three-Level, Three-Integration" Talent Training Model**

The study developed a three-stage progressive talent training path of "Basic Cognition - Technical Internalization - Innovative Application," achieving a three-integration mechanism of "integration of language and technology, integration of teaching and industry, integration of learning and innovation." In the first stage (semesters 1-2), the focus is on language foundation and AI cognition, offering a bilingual course "Introduction to Artificial Intelligence." The second stage (semesters 3-5) emphasizes technical internalization, offering courses such as "Python Programming" and "Introduction to Natural Language Processing," while integrating technical elements into language courses. The third stage (semesters 6-8) focuses on innovative application, where students enter enterprises for project practice and complete their graduation projects.

**5.2 Established a Modular Curriculum System**

Based on competency requirement analysis, the study constructed a "Artificial Intelligence + English" compound talent training curriculum system, with specific module settings shown in Table 1.

**Table 1:** Curriculum System Modules for "AI+English" Interdisciplinary Talent Development.

Course Name	Credits	Semester	Industry Partner Involvement
Advanced English Reading and Writing	4	1-4	Industry reading materials provided

Cross-Cultural Communication	2	3	Participation of foreign experts from enterprises
Translation Theory and Practice	4	4-5	Construction of enterprise case base
Introduction to Artificial Intelligence (Bilingual)	2	2	Lectures by enterprise engineers
Python Programming	3	3	Online training platform provided by enterprise
Fundamentals of Natural Language Processing	3	4	Joint experimental projects with enterprise
Computer-Aided Translation	2	5	Enterprise software licensing and training
Corpus Linguistics	2	5	Real-world enterprise corpus data
Language Intelligence Product Design	2	6	Project-based learning with enterprise
Machine Translation and Post-Editing	2	6	Real enterprise tasks
Cognitive Internship	2	2	Enterprise visits
Professional Internship	1	6-7	On-site practice at enterprise
Graduation Project (Dual-Supervisor System)	4	8	Enterprise-selected topics + joint supervision

### 5.3 Formed a Diverse Collaborative Evaluation Mechanism

The research established a three-party evaluation system composed of school teachers, enterprise mentors, and student self-assessments, along with an evaluation indicator system integrating knowledge, ability, and literacy. The proportion of process-oriented evaluation was increased to 50%, focusing on students' problem-solving skills and innovative performance in project practice. A dual certification mechanism of "ability certificate + course credits" was introduced, allowing students who complete enterprise project practice to obtain industry-recognized ability certificates, achieving an effective connection between learning outcomes and professional qualifications.

### 5.4 Significant Achievements in Talent Cultivation

After implementing the training program for one academic year, students in the experimental class performed excellently in knowledge acquisition, skill development, and employment competitiveness. Comparative data between the experimental class and the control class (traditional English major) are shown in Table 2.

**Table 2:** Comparison of Training Outcomes between Experimental Class and Control Class.

Evaluation Indicator	Experimental Class (N=32)	Control Class (N=35)	Significance Test
TEM-4 Pass Rate	93.75%	91.43%	p>0.05
Average Score of NLP Knowledge Test	85.6	62.3	p<0.01
CAT Operation Proficiency Rate	90.63%	28.57%	p<0.001

Number of Students Participating in Research/Innovation Projects	24	6	—
Number of Students Receiving Internship Offers	28	8	—
Graduation Intention towards AI-related Fields	81.25%	17.14%	p<0.001

Data show that, on the premise of consolidating language foundations, the experimental class students' technical literacy and industry application abilities are significantly better than those of the control class. Particularly noteworthy is that the employment intention of experimental class students in fields related to artificial intelligence has greatly increased, indicating that the training program effectively broadened students' career vision and development space.

Through interviews with participating students, it was found that most students believe the "dual-teacher" teaching team model (school teachers teach theory, enterprise mentors teach application) is the most recognized, as it helps them establish an effective connection between theory and practice. From the enterprise side, feedback indicates that students participating in the training program "learn quickly and adapt well," demonstrating good interdisciplinary thinking and the ability to solve practical problems.

## 6. Summary

This study, based on the perspective of school-enterprise cooperation, systematically constructed a training program for "Artificial Intelligence + English" compound talents. The study reaches the following main conclusions:

First, cultivating "Artificial Intelligence + English" compound talents is an inevitable choice in response to the demands of the times. Artificial intelligence technology is reshaping the language service industry, and talents with single-language abilities are at risk of being replaced. Training language talents with technical thinking is an important mission for higher education.

Second, school-enterprise cooperation is an effective path for cultivating interdisciplinary talents. Universities have advantages in disciplinary resources and teaching organization, while enterprises have advantages in technical platforms, real scenarios, and industry standards. Deep cooperation between the two can achieve complementary advantages and jointly solve the difficulties of cultivating compound talents.

Third, a three-in-one curriculum design of "language + technology + application" aligns with cognitive principles. Language core courses are the foundation, technical basic courses are the key support, and integrated application courses serve as a bridge for capability transformation. The organic connection of the three forms a complete capability training chain.

Fourth, a diversified and collaborative evaluation mechanism is crucial for ensuring training quality. Introducing enterprise mentors into evaluation, increasing the weight of formative assessment, and establishing a competence certification system can effectively guide students' learning behavior and ensure that training goals resonate with industry needs.

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