




Talent Cultivation Practice for Global Competence of “English + International Trade + NEV Overseas Expansion” under the Guidance of New Liberal Arts Initiative

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Abstract. The development of New Liberal Arts, against the backdrop of globalization and intelligentization, is promoting interdisciplinary integration in higher education. The “Belt and Road” Initiative and the internationalization of the new energy vehicle industry call for the urgent need to address the problems of the single talent training model and prominent disciplinary barriers in college English major cultivation. This study takes sophomore English majors of the 2024 cohort from the university as the experimental group and English majors of the 2023 cohort as the control group. Combining the strategic needs of international trade in new energy vehicles, it establishes the training objective of “English + International Trade +NEV Overseas Expansion” and constructs a six-dimensional integrated global competence teaching project repository that integrated the KAPIV elements (K=Knowledge, A=Ability, P=Practice, I=Innovation, V=Virtue, AI=Artificial Intelligence). By means of the “intensive teaching + KAPIV projects + independent learning” model, the training system and operational mechanism are reconstructed. Integrating diversified evaluation, a one-year follow-up survey on the cognitive level of global competence is conducted to comparatively analyze the changes before and after the teaching reform, and a global competence talent training model for English majors that meets industry demands is therefore reconstructed.

Keywords: Global Competence, NEV Overseas Expansion, talent training model.

1 Introduction

The construction of New Liberal Arts is a crucial direction for higher education reform in the era of globalization, informatization, and intelligentization. In 2018, the Ministry of Education of China first put forward the strategic requirement of developing “New Liberal Arts” [1]. In 2020, the Ministry of Education released the Declaration on the Construction of New Liberal Arts, pointing out that the construction of New Liberal

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Arts is a new direction for the reform of liberal arts education in colleges and universities^[2]. In 2021, the Guidelines for New Liberal Arts Research and Reform Practice Projects issued by the General Office of the Ministry of Education further clarified the need to respond to the technological revolution and industrial transformation, and enhance the core competitiveness of liberal arts talents^[3]. The development of New Liberal Arts has become an inevitable trend to improve the quality of higher education and enhance the employability of talents. This trend requires traditional liberal arts majors to accelerate the transformation to an interdisciplinary New Liberal Arts paradigm, and cultivate innovative and interdisciplinary intercultural talents to adapt to the needs of social development.

The national strategy of the “Belt and Road” Initiative has endowed the transformation of English majors in colleges and universities with a new mission, requiring the cultivation of “interdisciplinary English talents with a global perspective, proficiency in international rules, and the ability to participate in international affairs and competition”^[4]. General Secretary Xi Jinping also proposed the need to cultivate more international talents who should “master foreign languages, understand the world, and excel in professionalism”^[5]. The Guiding Opinions on Energy Work for 2025 formulated by the National Energy Administration emphasizes the need to “consolidate and deepen international energy cooperation”, covering areas such as overseas resource supply security and energy cooperation with key countries^[6]. The accelerated transformation of the global energy structure and the rigid constraints of the Paris Agreement’s emission reduction targets have further intensified the internationalization of China’s new energy vehicle industry. The International Energy Agency (IEA) predicted in 2024 that the global sales volume of NEVs will reach 40.8 million units and the ownership will reach 236 million units by 2030, with China contributing more than 60% of the share^[7].

The internationalization process of the NEV industry is in urgent need of a large number of interdisciplinary talents with “language proficiency + professional knowledge + global perspective”. As the primary evaluation criteria for international talents, global competence requires individuals to develop multi-dimensional literacy in the field of knowledge structure, professional skills, value cognition, and cross-cultural practice. This is highly consistent with the interdisciplinary path of “liberal arts + new technologies” emphasized by the Ministry of Education’s “New Liberal Arts” strategy. This concept not only provides an international cultivation standard for the development of New Liberal Arts but also becomes a key support for enhancing the international competitiveness of talents and shaping industrial leadership. Therefore, cultivating English majors needed for the overseas trade of NEV enterprises under the guidance of global competence has become an urgent task to support the globalization of the industry.

2 Practical Exploration of Talent Cultivation of Global Competence for “English + International Trade + NEV Overseas Expansion”

This research has assembled an interdisciplinary and integrated teaching and research team, consisting of 2 senior English teachers, 2 core faculty members specialized in automotive engineering, and 2 corporate mentors with expertise in the overseas trade of new energy vehicles. With a clear division of labor and close collaboration, the team has taken the following targeted actions: all members jointly conducted market research to define the training objectives for compound talents with proficiency in both English and automotive trade; English teachers and automotive engineering faculty worked hand in hand to build the KAPIV project-based teaching resource pool, achieving the in-depth integration of language skills and automotive trade expertise; English teachers took the lead in delivering teaching practices while their automotive counterparts provided professional technical support; corporate mentors introduced real-world industry cases and standards, and participated in teaching evaluation to ensure seamless alignment between talent training and industrial demands.

With the goal of verifying the effectiveness of the integrated teaching system of “English + International Trade + NEV Overseas Expansion”, the research team adopted a comparative design of experimental group and control group: the experimental group consisted of 2 classes (82 students) of English majors in the 2024 cohort, who participated in special projects including independent learning of NEV micro-courses (on the university’s self-built MOOC platform), practice of the English-Chinese translation teaching project repository, and enterprise internships from September 2024 to July 2025; the control group consisted of 2 classes (80 students) of English majors in the 2023 cohort, who adopted the traditional English cultivation model without NEV-integrated content. To ensure the comparability of the two cohorts at baseline, their key attributes were analyzed prior to the teaching reform: statistical results showed no significant differences in Gaokao English scores ($p = 0.63 > 0.05$) or prior international exposure (e.g., participation in international exchange activities, frequency of cross-cultural interactions) between the 2023 and 2024 cohorts. This indicates that the two groups were comparable at the initial stage, eliminating potential confounding factors for the subsequent effect comparison. After one year of practical exploration, the project has achieved initial outcomes as follows.

2.1 The Talent Cultivation Objectives for English Majors Reshaped

Through market research on enterprises’ overseas expansion, combined with the connotation of localized global competence talent cultivation and the results of project-based teaching practice, the research team further optimized the talent cultivation objectives for English majors from the five aspects in “listening, speaking, reading, writing, and translating” of English majors, forming a new set of global competence cultivation objectives in the field of “language Competence + Industry Mastery + International Practice” (see Table 1).

Table 1. Global Competence Cultivation Objectives for English Majors.

Basic Competencies	Cultivation Objectives	Supporting Dimensions
Listening	Be able to understand NEV project meetings overseas, capture key information on international policies, audio interpretations, and green infrastructure needs, and comprehend the core content.	Knowledge Dimension ; Action Dimension
Speaking	Be able to conduct NEV business negotiations in English, proficiently explain power battery safety standards, in-vehicle system functions, and the concept of technology sharing under the framework of “a community with a shared future for mankind” to overseas customers, and clearly convey technologies, cooperation intentions, and the green development plans of Chinese automobile enterprises.	Skill Dimension ; Action Dimension
Reading	Be able to read international standard documents of NEVs, corporate ESG reports, and overseas expansion policy documents, master the interpretation methods of the Green Investment Guidelines for the Belt and Road Initiative, and understand the strategic positioning of China’s NEV overseas expansion.	Knowledge Dimension ; Value Dimension
Writing	Be able to write overseas NEV project documents, after-sales analysis reports, and access certification application materials in English, master the writing standards of business emails and short ESG reports, and English expressions of Chinese strategic concepts such as “joint discussion, joint construction, and shared benefits”.	Skill Dimension ; Action Dimension
Translation	Be able to complete the written translation of NEV technical documents and policy documents, master the interpretation skills for overseas NEV project meetings and the official English translation of Chinese concepts such as “a community with a shared future for mankind” and the “Belt and Road Initiative”, and ensure the accuracy of cross-cultural communication.	Skill Dimension ; Knowledge Dimension

2.2 Project-Based Repository of Global Competence Driven by NEV Overseas Expansion

The research team has developed a teaching project repository centered on the cultivation of global competence, which integrates the dimensions of knowledge, ability, practice, innovation, virtue, and Artificial Intelligence. The repository is structured around three hierarchical knowledge modules: Global Industry Cognition - International Busi-

ness Practice - Cross-Cultural Technology Communication. A total of 22 practical projects have been designed in alignment with the strategic planning and on-site execution scenarios of NEV enterprises' overseas expansion. These projects are categorized into four types with clear competence-oriented objectives, effectively translating abstract professional competencies into tangible operational practices, and thus facilitating the cultivation of application-oriented talents. (Fig. 1).

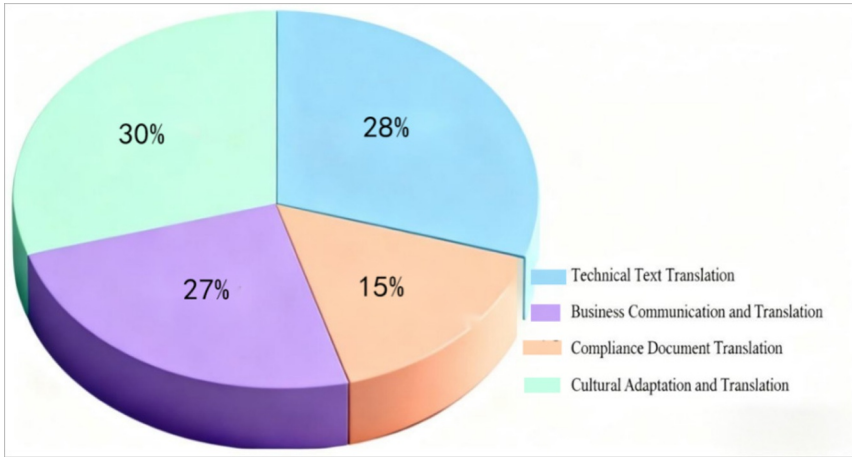


Fig. 1. Proportion of Project-based Teaching Achievements by Category.

2.2.1 Technical Text Translation Projects.

Core Competence Objective: Cultivate students' ability to accurately translate professional technical documents and standardize industry terminology.

Practical Implementation: Students were divided into groups to undertake the translation task of NEV equipment operation manuals. They first disassembled the professional terminology system of power battery maintenance and motor control, cross-referenced with industry standards (e.g., ISO 6469 for electric vehicle safety), and revised the translation drafts based on feedback from enterprise technical mentors.

Project Outcomes: A total of 5 English-Chinese translated versions of NEV equipment operation manuals were completed, 8 bilingual comparison tables of core technical parameters were compiled, and 3 glossaries of key terms related to photovoltaic module installation and wind power equipment maintenance were sorted out. These outputs have been provided to partner enterprises as basic technical document translation materials.

2.2.2 Business Communication Translation Projects.

Core Competence Objective: Develop students' cross-cultural business communication competence and translation skills for scenario-based business interactions.

Practical Implementation: To operationalize abstract communication competencies, students were tasked with simulating real-world business scenarios. A key project focused on simulating an NEV export pitch to a Southeast Asian distributor: students first

conducted market research on the preferences of Southeast Asian consumers for low-cost, high-energy-efficiency NEVs; then drafted bilingual promotion scripts incorporating local language habits and policy requirements (e.g., Thailand's NEV subsidy policies); finally, they performed role-playing of the pitch, with enterprise mentors evaluating the accuracy of translation and appropriateness of communication strategies. In addition, students completed business email translation and market research briefing compilation tasks following the same scenario-driven approach.

Project Outcomes: 3 simulation videos of communication between NEV enterprises and overseas distributors were produced, 10 English-Chinese/Chinese-English translations of business negotiation emails were finalized, 5 bilingual versions of overseas market demand research briefings were completed, and 4 sets of small-scale business negotiation dialogue scripts were compiled, providing practical support for enterprises' initial overseas business communication.

2.2.3 Compliance Document Translation Projects.

Core Competence Objective: Enhance students' ability to translate legal and compliance documents with precision and ensure consistency with local regulatory requirements.

Practical Implementation: Students first learned the basic compliance frameworks of target markets (Southeast Asia, the Middle East), then translated compliance documents under the guidance of legal translation experts, and verified the consistency of key clauses (e.g., product liability clauses, customs declaration terms) through cross-checking with official bilingual regulatory texts.

Project Outcomes: 8 compliance documents (including NEV enterprise overseas registration compliance statements and product quality commitment letters) were translated; the bilingual consistency of key clauses in import and export declarations was verified 5 times; and 5 summaries of basic compliance requirements for target countries (e.g., Southeast Asia, the Middle East) were sorted out, providing translation support for enterprises' overseas compliance work.

2.2.4 Cultural Adaptation Translation Projects.

Core Competence Objective: Foster students' cross-cultural adaptation competence and the ability to adjust translated content according to cultural contexts.

Practical Implementation: Students analyzed the cultural norms and consumer preferences of target markets, and revised translated promotional content based on cultural adaptation principles. For example, when adapting European promotion posters, they emphasized environmental protection concepts aligned with EU carbon neutrality policies; when targeting Southeast Asian markets, they avoided religiously sensitive elements (e.g., taboo colors in Islamic culture).

Project Outcomes: 6 adapted versions of NEV product overseas promotion poster copy were finalized; 4 sets of cultural etiquette reminder cards for receiving overseas customers were produced; and 3 cultural background notes were added to the translation of corporate social responsibility reports, facilitating the basic cross-cultural communication adaptation of partner enterprises.

2.3 The Improvement in of Global Competence in Cognitive Level

A one-year follow-up survey was conducted to examine the changes in the cognitive level of global competence (not the global competence level itself) among English majors from the 2023 cohort (control group) and the 2024 cohort (experimental group), aiming to compare and analyze the effects of the teaching reform before and after its implementation.

To address the core assessment of the cognitive level of global competence, a Likert 5-point scale (1 = completely unfamiliar, 5 = in-depth cognition) was adopted. This scale was developed based on validated academic frameworks to ensure its reliability and validity: specifically, its core dimensions referenced the “Global Learning” rubric from the AAC&U VALUE Rubrics and the core connotations of Byram’s Intercultural Communicative Competence (ICC) Model, focusing on cognitive-related indicators such as awareness of global issues, understanding of cross-cultural norms, and recognition of international communication principles. Prior to the formal survey, the scale was reviewed by three experts in cross-cultural education and applied linguistics to refine item wording and ensure content relevance. For reliability testing, Cronbach’s α coefficient was calculated to assess internal consistency, yielding a value of 0.81 ($\alpha > 0.8$ is considered to indicate high reliability), confirming stable and consistent measurement results. For construct validity, expert validity evaluation was conducted, with an average agreement rate of 0.86 among the three experts on the alignment between scale items and the cognitive level of global competence, demonstrating that the scale effectively measures the target cognitive construct.

Two rounds of questionnaires were distributed in September 2024 (pre-project) and July 2025 (post-project), with a 100% effective recovery rate for both rounds, providing a complete dataset for quantitative comparison of teaching effects between the two groups. The survey showed that before the implementation of the teaching reform, the cognitive levels of global competence of the two groups were basically the same, and the experimental group was even slightly lower than the control group in some dimensions. After one year of practice, the cognitive levels of the two groups showed significant differentiation: the experimental group adopting project-based teaching achieved a substantial improvement in the cognitive level of global competence, with the growth rate of each dimension exceeding 50%, and the growth rates of the knowledge cognition and value cognition dimensions even exceeding 100%; while the control group adopting the traditional teaching model only achieved a slow improvement in the cognitive level of each dimension, with the growth rate of all dimensions lower than 50%, and the growth rate of the value cognition dimension being the lowest (9%).

This comparative result clearly indicates that the project-based teaching model has a significant positive effect on improving the global competence of English majors (Fig.2).

While this study was carried out in collaboration with local new energy vehicle enterprises, the core design logic of the model—integrating discipline knowledge with scenario-based practical projects—does not rely exclusively on NEV industry partnerships. It can be adapted to other sectors such as green technology and digital services

by replacing project scenarios and adjusting practical content. For institutions without direct industry ties, the model can still be implemented effectively by cooperating with local chambers of commerce, international cultural organizations, or using virtual simulation scenarios, which enhances its generalizability across different educational contexts.

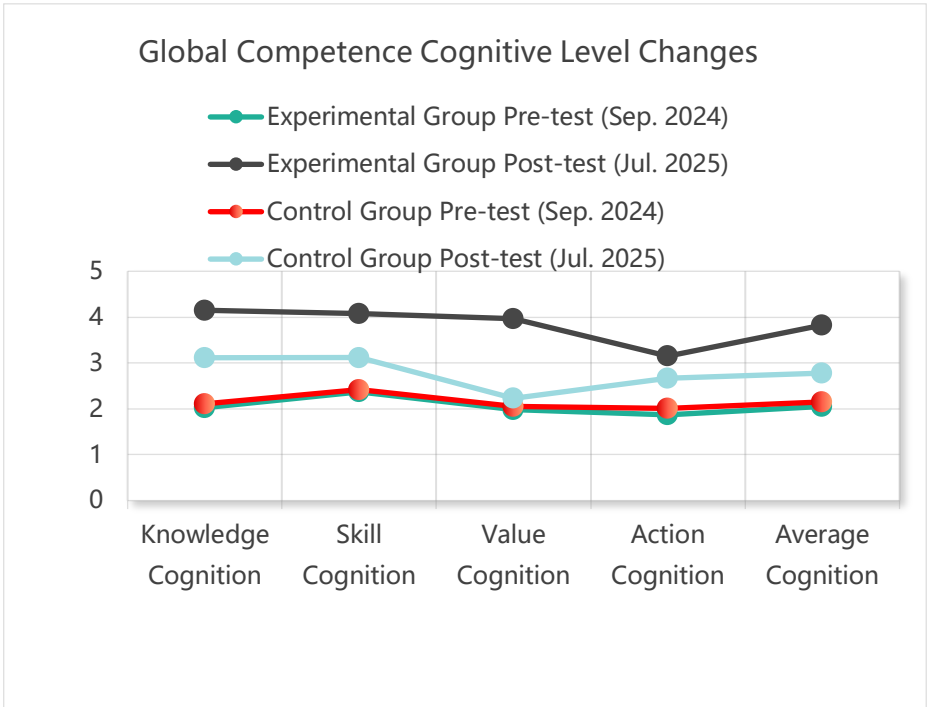


Fig. 2. Global Competence Cognitive Level Changes.

2.4 Competition Achievements

Relying on the KAPIV project-based teaching, the students in the experimental group received targeted training in critical thinking, cross-cultural collaboration, team coordination, and innovative practical abilities. In industry-influential competitions such as the National English Translation Competition for College Students and the Cross-Cultural Communication Competition, the experimental group performed outstandingly with a significantly higher award-winning rate. Moreover, the experimental group had obvious advantages in the sub-items of team collaboration and practical innovation competitions, which effectively confirms the practical effect of project-based teaching on the cultivation of students' global competence (see Table 2).

Table 2. Comparison of Major Awards Between English Majors with and Without Participation in Project-Based Teaching

Competition Type	Experimental Group (82 students)	Control Group (80 students)
National English Translation Competition for College Students	10 awards (including 2 National Second Prizes, 5 Provincial First Prizes)	6 awards (all Provincial First Prizes)
Jiangsu Lscat Translation Competition	12 awards (including 3 First Prizes, 6 Second Prizes)	7 awards (including 1 First Prize, 4 Second Prizes)
Higher Education Press Cup Business English Debate Competition	3 awards (including 1 National First Prize (Silver), 2 Second Prizes)	1 award (Provincial Third Prize)
National English Competition for College Students (Provincial Level and Above)	13 awards (including 2 First Prizes, 5 Second Prizes)	8 awards (including 1 First Prize, 4 Second Prizes)
China College Students' Language Competence Competition	9 awards (including 1 National Final First Prize, 3 Provincial First Prizes)	2 awards (both Provincial Third Prizes)
The 4th "Wenli Cup" Poetry Creation Competition	4 awards (including 1 first Prize and 2 Second Prizes)	1 award (Third Prize)
"21st Century Cup" National English Speaking Competition	2 awards (including 1 Provincial Second Prize, 1 Provincial Third Prize)	0 award
Foreign Language Teaching and Research Press "Vocabulary Master" National English Vocabulary Competition for College Students	14 awards (including 1 Special Prize, 3 First Prizes)	4 awards (all Third Prizes)
English Comprehensive Ability Competition for College Students to Understand Contemporary China (Provincial Level)	6 awards (1 for interpretation, 1 for translation, 0 for speaking, 3 for short videos, 1 for comprehensive)	2 awards (both for short videos)

2.5 Construction of the English Major Cultivation System Integrating "English Proficiency + Industry Knowledge + Application Scenarios"

By summarizing the students' online and offline learning outcomes, combining the results of the Likert scale questionnaire on students' global competence cognitive level before and after the teaching reform, and the market research data on NEV enterprises' overseas expansion, the research team formulated an English major talent cultivation path oriented to NEV expansion from four aspects: teaching objectives, teaching plans, teaching practice, and teaching evaluation, and reconstructed the "English + Industry

Knowledge + Application Scenarios” global competence cultivation system for English majors in colleges(see Fig.3).

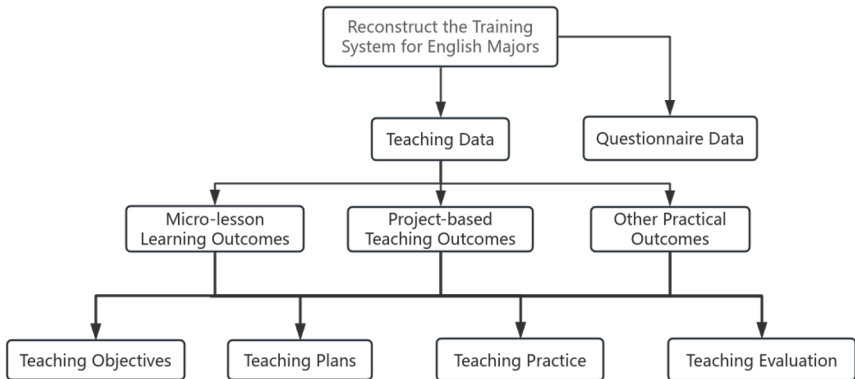


Fig. 3. English Major Cultivation Model Integrating “English Proficiency + Industry Knowledge + Application Scenarios”

3 Conclusion

Facing the dual challenges of the connotative development of higher education and industrial technological transformation, English majors are confronted with structural contradictions such as the shrinking demand for traditional language positions, the Replacement of Traditional Jobs by Artificial Intelligence, and the insufficient supply of interdisciplinary talents. As a national strategic emerging field, the NEV industry is in urgent need of interdisciplinary foreign language talents with technical comprehension ability, cross-cultural communication ability, and the ability to disseminate Chinese discourse for its globalization development. After one year of project-based teaching practice, this project takes the cultivation of global competence as the core, reshapes the localized cultivation objectives for English majors, and combines Chinese cultural genes with the technical needs of the NEV industry to construct a “trinity” project-based teaching and cultivation model of “English + International Trade + NEV Overseas Expansion”.

Practice Data shows that the cognitive level of global competence of students in the experimental group has been significantly improved, with the growth rates of core dimensions such as knowledge cognition and value cognition exceeding 100%, and the students have shown outstanding performance in practical abilities such as technical text translation and cross-cultural business communication. This model not only strengthens students’ professional literacy in the whole process of the NEV industry chain but also focuses on cultivating their confidence in communicating Chinese solutions in the formulation of international standards. It offers not only practical solutions for solving the development predicament of English majors but also reference for

higher education to cultivate talents in line with national strategies and the development of emerging industries.

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Data Availability Statement: The data that supports the findings of this study are available within the article.

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