Research on the Construction Status, Objectives and Innovative Development Paths of the Virtual Teaching and Research Office for College English

Li Zhou[1]

[1] School of Humanities, Foshan University, Foshan 528000, China
Correspondence: Li Zhou, School of Humanities, Foshan University, Foshan 528000, China.

Abstract

In July 2022, the *Notice of the Department of Higher Education of the Ministry of Education on Launching the Pilot Construction of Virtual Teaching and Research Offices* explicitly stated that virtual teaching and research offices (VTOs) serve as the core carriers for the innovation of grassroots teaching organizations in the "Intelligence +" era. As a pivotal initiative for foreign language education in universities to respond to the national strategy of connotative development of higher education, the construction of VTOs for College English is not only an inherent requirement for advancing the reform of English teaching modes, but also a critical pathway to enhance the quality of foreign language education. Current academic research in this field primarily focuses on the exploration of macro-models among universities included in the pilot list of the Ministry of Education, whereas there exists a notable deficiency in studies summarizing practical experience of non-pilot universities and conducting micro-level research on content construction. Based on this observation, the present study systematically sorts out the construction patterns and development features of domestic VTOs for College English, clarifies their core construction objectives, and constructs practical and operable development paths from four dimensions: the innovation of teaching and research forms, the deepening of teaching research, the co-construction of high-quality resources, and the professional development of teachers. This study aims to provide theoretical references and practical paradigms for universities to deepen the reform of foreign language education and teaching, and to facilitate the high-quality development of higher education.

Keywords: virtual teaching and research offices (VTOs) for college English, construction status, objectives and innovative development paths

1. Introduction

Against the backdrop of the in-depth integration of intelligent technologies such as artificial intelligence and big data with education and teaching, traditional grassroots teaching organizations are confronted with an urgent demand for morphological innovation and functional upgrading. To strengthen teachers' capacity in information technology application and cultivate a high-quality and professional teaching workforce, the Ministry of Education has continuously advanced the transformation

of grassroots teaching organizations, including teaching and research offices and course teaching teams in recent years, advocating the improvement of teaching quality driven by teaching and research innovation. In February 2021, the *Key Work Points of the Department of Higher Education of the Ministry of Education for 2021* first incorporated "virtual teaching and research offices" as a key task for the innovation of talent training modes in universities. The pilot construction notice issued in July of the same year further specified that as a novel form of teaching organization under the background of "Intelligence + Education", VTOs are required to achieve breakthroughs in the innovation of teaching and research modes, the deepening of teaching research, the co-construction and sharing of resources, and the quality enhancement of teacher training.

As a core course of general education in universities, the teaching quality of College English is directly linked to the achievement of the goal of cultivating compound talents. VTOs offer a new avenue for breaking inter-university barriers in College English teaching, integrating regional educational resources, and promoting the coordinated development of teaching. Nevertheless, current research has obvious limitations. On the one hand, research objects are concentrated in pilot universities, neglecting the practical exploration of non-pilot universities—despite lacking policy support and resource advantages, these universities have accumulated distinctive experience in localized construction. On the other hand, most studies focus on the construction of macro-models, with insufficient discussions on micro-level aspects such as curriculum content optimization and teaching activity design. Therefore, based on the overall construction status of domestic VTOs for College English, this study clarifies their core construction objectives, explores multi-dimensional innovative development paths, and provides universal references for universities of various types to carry out the construction of VTOs.

2. Analysis of the Construction Status of Virtual Teaching and Research Offices for College English

2.1 Construction Pattern and Regional Distribution Characteristics

Since the implementation of the pilot policy of VTOs by the Ministry of Education, the construction of VTOs for College English has exhibited a development pattern characterized by "full coverage, regional imbalance, and diversified types". In terms of quantity and scale, more than 100 universities nationwide have participated in the construction of VTOs for College English, forming a three-tier construction system at the national, provincial, and university levels. In terms of regional distribution, eastern coastal provinces (e.g., Guangdong, Jiangsu, Zhejiang, and Shandong) have taken a clear leading position in construction progress due to their advantages in economic strength and educational resource aggregation. Not only do the number of VTOs account for over 45% of the national total, but these regions have also developed a mature model of "provincial-level overall planning, inter-university alliance, and resource sharing". Central regions (Henan, Hubei, Hunan, and Anhui) feature the model of "leading role of backbone universities and collaborative co-construction within the region", with the construction scale expanding steadily, and the number of VTOs accounting for approximately 30% of the national total. Some provinces have promoted resource complementarity among universities of different levels by establishing provincial-level virtual teaching and research platforms. Although the western regions (Shaanxi, Sichuan, Chongqing, and Gansu) have a relatively small number of constructions (accounting for around 25% of the national total) due to constraints in educational resources and technical conditions, they have demonstrated a trend of "differentiated development and characteristic breakthroughs". For instance, relying on the geographical advantages of the "Belt and Road", some universities in Shaanxi Province have established the "Virtual Teaching and Research Office for Language and Culture of Countries along the Silk Road", integrating College English teaching with the cultivation of intercultural communication competence, and thus forming a unique construction model.

In terms of university types, comprehensive universities, leveraging their advantages of complete disciplinary categories and strong teaching staff, occupy a dominant position in the construction of VTOs, primarily undertaking core tasks such as resource integration and platform construction. Science and engineering universities focus on characteristic directions including scientific English and engineering

English, and construct a differentiated model of "English teaching + professional application". Normal universities give play to their strengths in teacher education, focusing on the innovation of teaching methods and the construction of teacher training systems. Industry-specific universities such as finance and economics universities and medical universities have developed targeted teaching resources and teaching and research projects in response to the demands of professional English.

2.2 Construction Types and Operation Mode Innovation

At present, VTOs for College English have mainly developed three core types, each of which demonstrates significant differences in construction objectives, organizational structure, and operation mechanism:

2.2.1 Curriculum (Group) Collaborative Teaching Type

Taking core College English courses (e.g., Integrated English, Academic English, and Audio-Visual-Speaking) or course groups as the link, teachers from multiple universities form teaching teams to conduct inter-university collaborative teaching. Its operation mode is centered on "resource sharing, collective lesson planning, and joint teaching", realizing the synchronization of teaching progress, intercommunication of teaching resources, and unification of teaching evaluation via online platforms. For example, some VTOs adopt the teaching mode of "leading teachers + auxiliary teachers", where backbone teachers from core universities serve as lecturers, and teachers from other universities are responsible for offline tutoring and personalized teaching, thus forming a collaborative teaching mechanism of "unified online teaching and targeted offline tutoring".

2.2.2 Professional Integration and Innovation Type

Focusing on the in-depth integration of College English and professional education, teaching and research teams are co-established by English teachers and professional teachers to carry out work related to the construction of professional English courses and the cultivation of compound talents. The operation mode of this type of VTO emphasizes "demand orientation, cross-border collaboration, and practice orientation". By investigating industry demands and analyzing the objectives of professional

talent training, it develops a distinctive English curriculum system. For example, the "Medical English Virtual Teaching and Research Office" led by a medical university has united 15 medical universities, developed a curriculum system covering modules such as basic medical English, clinical communication English, and medical paper writing, compiled 3 sets of industry-specific textbooks, and established practical teaching bases in collaboration with multiple hospitals, thus realizing the organic integration of English teaching and medical professional practice.

2.2.3 Teaching Reform and Research Type

Taking key and difficult issues in College English teaching as research objects, research teams are composed of university teachers, educational experts, and researchers from teaching and research institutions to conduct special teaching research. Its operation mode is centered on "project-driven, thematic discussion, and achievement transformation", focusing on hot topics such as the integration of curriculum ideology and politics, the application of information-based teaching, and the reform of teaching evaluation. For example, some VTOs have conducted research on topics including "the application of the Production-Oriented Approach in College English teaching" and "artificial intelligence technology empowering English writing teaching", forming a series of teaching reform achievements, which have been promoted and applied in member universities through teaching and research activities and special training programs.

3. Core Construction Objectives of Virtual Teaching and Research Offices for College English

3.1 Constructing a Collaborative Professional Learning Community for Teachers

With the core objective of breaking the isolated state of teachers' teaching and promoting the coordinated improvement of professional competence, VTOs for College English aim to construct a professional learning community for teachers characterized by "exchange and sharing, mutual assistance and common progress, and sustainable development". By establishing a regular teaching and research platform, organizing inter-university teaching discussions, teaching experience sharing, and teaching problem diagnosis activities, it promotes in-depth communication and

ideological collision among teachers. It invites domestic and foreign experts in foreign language education to deliver online lectures and special training sessions, introducing cutting-edge teaching concepts and research findings to broaden teachers' academic horizons. It organizes inter-university teaching observation, teaching competitions, joint teaching and research projects and other activities to provide teachers with platforms for practical training and capacity demonstration.

Meanwhile, VTOs establish a mentorship mechanism to promote pairing assistance between backbone teachers and young teachers, facilitating the rapid growth of young teachers. Through the co-construction of teaching resource libraries, joint application for teaching and research projects, and collaborative publication of academic papers, it enhances teachers' teaching and research capabilities. It establishes teachers' professional development portfolios, recording teachers' participation in teaching and research activities, training programs, and achievement output, providing references for teachers' professional title promotion and selection of excellent teachers, and thus forming a virtuous circle of "teaching and research promoting professional growth, and professional growth facilitating teaching practice".

3.2 Creating an Open and Shared Ecosystem of Teaching Resources

Following the principle of "resource co-construction, complementary advantages, and on-demand utilization", it builds a diversified resource library covering teaching resources, academic resources, and practical resources, creating an open and shared ecosystem of teaching resources. In terms of teaching resources, it integrates core resources including high-quality textbooks, courseware, teaching videos, question banks, and teaching cases, classifying and organizing them according to course types, teaching modules, and difficulty levels to achieve accurate retrieval and efficient utilization of resources. It encourages teachers to develop personalized teaching resources (e.g., micro-lectures, virtual simulation teaching materials, and professional English cases) combined with teaching practice, and ensures the quality of resources through resource evaluation mechanisms (peer review, student feedback, and expert evaluation).

In terms of academic resources, it collects and organizes academic papers, research reports, monographs, and conference materials in the field of foreign language education, establishing an academic resource sharing platform to support teachers in conducting teaching research. It establishes an academic exchange mechanism, regularly organizing academic lectures, thematic seminars, paper writing workshops and other activities to promote the dissemination and transformation of academic achievements. In terms of practical resources, it integrates on-campus and off-campus practical teaching bases, enterprise resources, and intercultural communication platforms to provide students with integrated online and offline practical opportunities, such as virtual simulation language practice, inter-university cooperation projects, and enterprise internship matching, realizing the organic connection between theoretical teaching and practical teaching.

3.3 Establishing a Cross-Border Integrated Collaborative Teaching Mechanism

Breaking inter-university, regional, and disciplinary boundaries, it establishes a teaching mechanism featuring "inter-university collaboration, disciplinary integration, and teacher-student interaction", promoting the innovation of College English teaching modes. In terms of inter-university collaboration, via virtual teaching and research platforms, it enables synchronous classes for students from different universities, cross-university team learning, and joint development of practical projects, facilitating the radiation of high-quality teaching resources to underdeveloped universities. It establishes inter-university teaching teams, assigning teaching tasks according to teachers' professional strengths, forming a teaching pattern of "complementary advantages and division of labor and collaboration".

In terms of disciplinary integration, it promotes the in-depth integration of College English with professional disciplines, ideological and political disciplines, and information technology disciplines, integrating professional knowledge, ideological and political elements, and technological applications into the English teaching process. It develops interdisciplinary curriculum modules, such as "English + professional literature reading", "English + intercultural communication", and "English +

digital technology application", to improve students' comprehensive application capabilities. In terms of teacher-student interaction, it builds teacher-student communication channels using online platforms, realizing real-time answers to teaching questions, dynamic tracking of learning progress, and customization of personalized learning plans. It encourages students to participate in the construction of teaching resources and teaching evaluation feedback, forming a positive interaction mechanism of "teacher-led, student-centered, and mutual promotion of teaching and learning".

4. Innovative Development Paths of Virtual Teaching and Research Offices for College English

4.1 Innovation of Teaching and Research Forms: Multi-Dimensional Integration and Mode Upgrading

4.1.1 Deep Integration of Curriculum Ideology and Politics, Realizing the Unity of Value Guidance and Knowledge Imparting

Based on the characteristics of College English courses, it constructs a three-in-one teaching system of "language teaching + cultural inheritance + value shaping". It thoroughly explores ideological and political elements in textbooks. For example, in the teaching of western cultural themes, it guides students to compare the differences between Chinese and western cultures and enhance cultural confidence; in the teaching of social hot topics, it combines China's development achievements to cultivate students' sense of national identity and social responsibility; in the teaching of intercultural communication themes, it advocates the values of mutual learning and inclusive coexistence among civilizations. It innovates the approaches to integrating ideological and political elements into teaching, naturally incorporating them into the teaching process through case teaching, thematic discussions, role-playing and other activities, avoiding rigid implantation. For instance, some VTOs have carried out a series of teaching activities themed "Telling Chinese Stories in English", organizing students to introduce Chinese traditional culture, scientific and technological achievements, and social development in English, enhancing their language proficiency while strengthening their awareness of cultural communication.

4.1.2 Integration of Curriculum, Certification and Competition in Talent Cultivation, Constructing a Competence-Oriented Teaching System

With the goal of "improving students' employment competitiveness and career development capabilities", it promotes the organic integration of curriculum teaching with vocational qualification certificate examinations and discipline competitions. In curriculum design, referring to the competence requirements of certificates such as CET-4, CET-6, National Business English Test (NBET), Business English Certificate (BEC), and Test of English for International Communication (TOEIC), it optimizes teaching content and increases practical English skill training. In teaching methods, it introduces real examination questions and simulation training of certificate examinations, conducting teaching practice of "promoting learning and teaching through examinations". Meanwhile, it integrates discipline competitions into the teaching process, organizing students to participate in competitions such as the "FLTRP · NBET Cup" National English Competition for College Students, the National College Students English Writing Competition, and the Intercultural Communication Competition, improving students' language application capabilities and innovative thinking through "promoting practice and innovation through competitions". Some VTOs have established an integrated training program of "curriculum, certification and competition", incorporating certificate examination results and competition awards into the students' comprehensive evaluation system, forming a virtuous circle of "teaching – certification – competition – employment".

4.1.3 Digital Transformation of Teaching and Research Activities, Innovating the Forms of Teaching and Research Organization

With the assistance of intelligent technology, it optimizes the forms of teaching and research activities, constructing a teaching and research mode of "combination of online and offline, and complementarity of virtual and real scenarios". Online, relying on virtual teaching and research platforms, it conducts inter-university real-time discussions, teaching video observation, and online collective lesson planning, breaking the constraints of time and space. It employs functions such as live broadcast, recorded broadcast, and bullet screen interaction to

improve the participation and effectiveness of teaching and research activities. Offline, it organizes teaching salons, special workshops, teaching achievement exhibitions and other activities to promote face-to-face communication and practical discussions among teachers. It innovates the content of teaching and research activities, carrying out characteristic activities such as "micro teaching and research", "thematic teaching and research", and "project-based teaching and research". For example, conducting special discussions on specific teaching difficulties, carrying out joint research around teaching reform projects, and conducting collective lesson planning combined with the construction of high-quality courses. Some VTOs have introduced the flipped teaching and research model, first allowing teachers to independently learn cutting-edge teaching concepts and methods, and then conducting exchange discussions and practical application through a combination of online and offline methods, improving the pertinence and effectiveness of teaching and research activities.

4.2 Co-Construction of High-Quality Resources: Integration, Sharing and Dynamic Optimization

4.2.1 Refined Construction and Sharing of Teaching Resources

It establishes a closed-loop mechanism of "demand investigation – resource development – quality review – sharing and application – feedback and optimization". Through questionnaires, teacher interviews, student feedback and other methods, it accurately identifies the English learning needs of students from different universities and different majors. It organizes teachers from member universities to jointly develop characteristic teaching resources, such as scientific English textbooks for science and engineering students, academic English courseware for liberal arts students, and professional English case libraries for industry-specific universities. It establishes a resource quality review committee, composed of subject experts and backbone teachers, to conduct rigorous reviews on the scientificity, applicability, and innovation of resources. Through virtual teaching and research platforms, it realizes classified retrieval, on-demand download, and online utilization of resources, and establishes a resource use feedback mechanism to continuously optimize resource quality based on the use evaluation of teachers and students. For example, the teaching

resource library built by a VTO includes 8 modules and more than 1,200 resources, achieving "full coverage of basic resources, differentiation of characteristic resources, and regular updating of resources".

4.2.2 Collaborative Construction and Dissemination of Academic Resources

It integrates the academic research achievements of member universities, building a four-in-one academic resource library of "academic papers – research reports – teaching and research cases – academic lectures". It encourages teachers to upload published academic papers, completed teaching and research project achievements, and award-winning teaching cases to the platform to realize the sharing of academic resources. It regularly invites renowned domestic and foreign experts to deliver online academic lectures and special reports, recording and uploading them to the resource library for teachers' independent learning. It organizes inter-university academic seminars and paper exchange meetings to promote the collision of academic ideas and the transformation of research achievements. It establishes an academic resource dissemination mechanism, promoting high-quality academic resources through platform recommendation and special push notifications. It encourages teachers to conduct secondary research based on shared academic resources and jointly apply for teaching and research projects at various levels, improving the overall academic research level.

4.2.3 Cross-Border Integration and Sharing of Talent Resources

It constructs a talent resource sharing system featuring "expert guidance, backbone support, and full participation". It invites domestic and foreign experts in foreign language education, information technology experts, and industry elites to form an advisory team to provide theoretical guidance and practical support for the construction of VTOs. It selects backbone teachers from member universities to form a core team, undertaking core tasks such as resource development, teaching and research organization, and teaching demonstration. It establishes an inter-university talent exchange mechanism, organizing teachers to teach across universities, take temporary positions, and conduct joint teaching and research, promoting the rational flow of talent resources. It builds a talent training platform, cultivating a group of

compound teachers with teaching capabilities, research capabilities, and technology application capabilities through expert lectures, mentoring pairs, and project cooperation. Some VTOs have established a talent resource pool, integrating professional talents from different fields to provide personalized teaching guidance, teaching and research support, and technical services for member universities.

4.3 Quality Improvement of Teacher Training: Precise Empowerment and Long-Term Incentives

4.3.1 Construction of a Personalized Training System

Based on teachers' professional development needs, it constructs a three-stage training system of "basic competence – professional competence – innovative competence". Basic competence training focuses on core teaching skills such as teaching design, classroom management, and teaching evaluation, improving teachers' basic teaching skills through workshops, case teaching, and practical drills. Professional competence training focuses on cutting-edge theories of foreign language education, disciplinary development trends, and professional English teaching methods, broadening teachers' professional horizons through academic lectures, thematic seminars, and course learning. Innovative competence training focuses on information technology application, teaching mode innovation, and teaching and research project development, improving teachers' innovative capabilities through technical operation, project practice, and achievement incubation. It formulates differentiated training programs for teachers of different levels, providing a step-by-step training of "entry – growth – maturity" for young teachers, an advanced training of "breakthrough – leadership – radiation" for backbone teachers, and adaptive training of "adaptation – improvement – innovation" for senior teachers.

4.3.2 Construction of an Intelligent Training Platform

Relying on information technology, it builds an intelligent training platform combining "online + offline" and "synchronous + asynchronous" modes. The online platform integrates high-quality training resources, providing a wealth of online courses, expert lecture videos, teaching case analyses and other learning content, supporting teachers' independent

learning, real-time interaction, and achievement display. It uses big data technology to analyze teachers' learning behaviors and needs, pushing personalized learning suggestions and training resources. Through functions such as live classrooms, online discussions, and virtual workshops, it conducts inter-university synchronous training. Offline training focuses on practical operation and face-to-face communication, organizing teachers to participate in teaching observation, field visits, and centralized training activities, promoting the integration of theoretical learning and practical application. Some VTOs have introduced the "AI + training" mode, using artificial intelligence technology to conduct teaching ability evaluation, personalized learning path planning, and teaching effect feedback, improving the precision and effectiveness of training.

4.3.3 Improvement of Long-Term Incentive Mechanisms

It establishes a diversified incentive mechanism combining "material incentives + spiritual incentives + development incentives". In terms of material incentives, teachers who actively participate in the construction of VTOs and achieve outstanding results are provided with funding subsidies, resource support, and bonuses. In terms of spiritual incentives, through commending advanced individuals, publicizing typical cases, and issuing honorary certificates, it enhances teachers' sense of achievement and belonging. In terms of development incentives, the participation in VTO work is included as a key indicator in teachers' performance evaluation, professional title promotion, and selection of excellent teachers, providing teachers with more development opportunities and platforms. It establishes a mechanism for the identification and transformation of teaching and research achievements, conducting joint identification of co-developed teaching resources, jointly completed teaching and research projects, and collaboratively published academic papers, and promoting their popularization and application in member universities. It sets up a special reward fund for VTOs, commending outstanding collectives and individuals in resource construction, teaching and research activities, and teaching reform, stimulating teachers' enthusiasm and initiative to participate in the construction of VTOs.

5. Conclusion

By systematically sorting out the current construction status of domestic VTOs for College English, this study clarifies that their core construction objectives are to build a College English education and teaching community integrating teachers' professional development, teaching resource sharing, and collaborative teaching implementation, in accordance with the principles of "demand orientation, collaborative innovation, and co-construction and sharing". At present, VTOs for College English have formed a construction pattern of "full coverage, regional differentiation, and diversified types", presenting three core types: curriculum collaborative teaching, professional integration and innovation, and teaching reform and research. However, problems remain, such as insufficient research on non-pilot universities and weak micro-level content construction.

To promote the high-quality development of VTOs for College English, efforts should be made in three aspects. First, innovate teaching and research forms, and construct diversified teaching and research modes through the integration of curriculum ideology and politics, the integration of curriculum, certification and competition, and the digital transformation of teaching and research activities. Second, strengthen resource co-construction, realize the in-depth integration and dynamic optimization of teaching resources, academic resources, and talent resources, and create an open and shared resource ecosystem. Third, improve the teacher training system, and enhance teachers' professional literacy and participation enthusiasm through personalized training, intelligent platform construction, and long-term incentive mechanism development. In the future, the construction of VTOs for College English should further strengthen technology empowerment, highlight characteristic development, deepen cross-border integration, provide stronger support for the reform of foreign language education and teaching in universities, and contribute to the high-quality development of higher education.

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