



Research On the Construction Path of Bilingual Dual - Teacher Team Under the Background of Vocational Undergraduate

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Abstract. The development of bilingual dual-teacher teams is an important approach for cultivating interdisciplinary talents with both professional skills and bilingual abilities in vocational undergraduate education. This article presents a comprehensive framework and path study for building such teams, and it explores in depth how to achieve the overall goal of establishing and developing bilingual dual-teacher teams through well-structured team formation, development, optimization, and practical exploration.

Keywords: Bilingual Dual-Teacher Team Building, Team Formation, Team Building, Team Improvement

1 Introduction

With industrial upgrading and technological innovation, the advancement of internationalization of education, and the deepening of school-enterprise cooperation in vocational education, vocational undergraduate education is faced with the challenge of new quality and new standards of talent cultivation. At the same time, the deepening of cooperation projects between vocational colleges and countries along the 'Belt and Road' has prompted vocational undergraduate education not only to cultivate technical talents with solid professional knowledge and rich practical skills, but also to cultivate composite talents with bilingual language ability and global vision. Therefore, building a bilingual faculty and carrying out effective bilingual teaching mode and bilingual classroom are the key strategies for vocational undergraduate education to cultivate international talents with new quality and high standard, and bilingual faculty will also build the bridge of language and culture in international cooperation and communication^[1].

2 Framework for Bilingual Dual-Teacher Team Building

The construction of bilingual dual-teacher team should be aimed at cultivating practical talents with bilingual ability, focusing on teaching practice and industry dynamics,

relying on school-enterprise cooperation, industry-teaching fusion and international exchanges, and exploring a scientific and effective bilingual teachers' cultivation program and pathway.

The construction of a bilingual dual -teacher team must begin with an overall program design, establishing a logical organizational structure for the entire team, as shown in Figure 1. Centering on teaching practice and industry trends, relying on school-enterprise cooperation, integration of industry and education and international exchanges, a scientific and effective bilingual teacher training program and approach should be explored. To build a bilingual dual-teacher team, we must first have an overall plan design, establish a logical organizational structure for the whole team, and gradually promote the construction of the team by layers and segments according to the steps of the three stages of team formation, team building and team improvement. Through the implementation of scientific selection mechanism, multi-dimensional testing and dynamic assessment, as well as hierarchical team formation, the primary model of bilingual and dual-teacher team is constructed. Considering the needs of the industry and positions, the team members can set and plan their career goals, and gradually promote the team building through the development and training of diversified professional skills and foreign language ability, as well as the practice and feedback in teaching practice and international projects. Continuously assess and feedback the comprehensive ability of team members, dynamically adjust the hierarchical structure of the team according to the work ability and performance, establish corresponding support and incentive mechanism to mobilize the enthusiasm of members, build resource sharing platform to obtain diversified resources and feedback, and finally achieve the final improvement of the whole team [2].

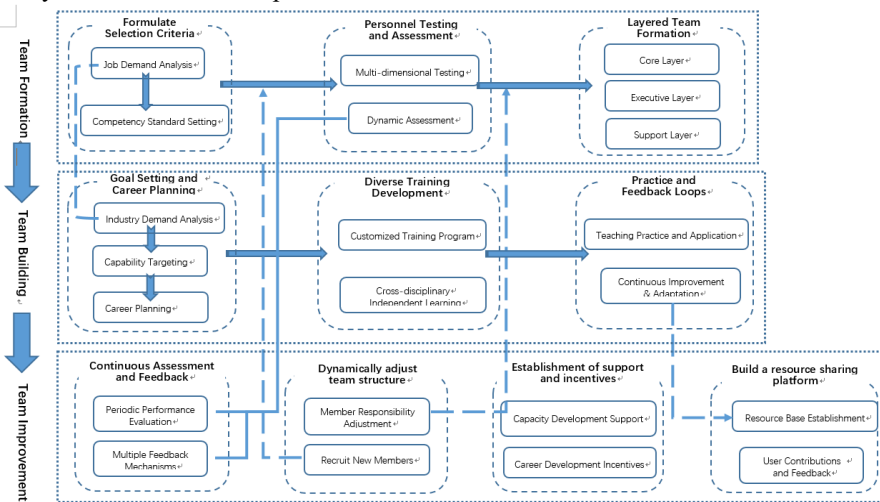


Fig. 1. Framework map for bilingual dual-teacher team building.

3 Bilingual Dual-Teacher Team Formation

The initial initiative for the formation of the bilingual bivocational team is to formulate the selection criteria. According to the national policy of “Accelerating the Construction of Modern Vocational Education System”, the requirements of “China Education Modernization 2035” to comprehensively improve the level of international exchanges and cooperation in vocational education, as well as the relevant provisions of “Promoting the Educational Actions of Building One Belt and One Road”, we will analyze the job requirements in combination with the school's overall development plan, the objectives of cultivating bilingual talents, the demand for bilingual ability in school-enterprise cooperation, the demand for internationalization process and the cultivation plan for international students. The team will analyze the job requirements, determine the necessary qualities and basic professional, teaching and foreign language abilities of the team members, and serve as the basis and criteria for talent selection^[3], taking into account the overall development plan of the school, the demand for bilingual competence in school-enterprise cooperation, the demand for the internationalization process, and the cultivation plan for international students.

The second step in the formation of the bilingual dual-teacher team is the implementation of personnel testing and assessment. According to the established selection criteria and bases, the initial selected personnel of the team are determined through both external talent introduction and internal selection of excellent teachers. Next, a multi-dimensional comprehensive test is conducted for the preliminary candidates, which not only covers traditional written tests and interviews, but also includes on-site teaching simulations, actual case studies of enterprises, teamwork tests, etc., so as to comprehensively assess the candidates' professional competence, teaching ability, language ability, and other social soft skills from multiple aspects. Those who meet the assessment standards are finally absorbed into the bilingual dual-teacher team and are subject to dynamic assessment in the subsequent training, work and teaching practice. The dynamic assessment mechanism mainly includes the regular performance evaluation and multiple feedback mechanisms in the “team improvement” stage in Figure 1, covering teaching quality assessment, student feedback on bilingual classrooms, enterprise assessment and peer review, etc., aiming at promoting the team members to continuously improve their comprehensive quality, broaden their international horizons, and meet the goals of bilingual bi-lingual teacher team building and meet the requirements of bilingual teaching and national bilingual education. objectives, and meet the needs of bilingual teaching and nationalized international education^[3].

The third step in the formation of the bilingual dual-teacher team is to realize the layering of the team. Based on the results of the aforementioned assessment and evaluation, the team members are divided into three tiers: the core tier, the executive tier, and the support tier. The core layer is composed of experienced members with outstanding abilities and leadership skills. It is usually recommended that the dean of teaching and the head of the teaching department form the core layer members, who are responsible for the team's overall strategic deployment and planning, financial budgeting and management, as well as the negotiation and interface with the coopera-

tive projects or enterprises. The executive layer is usually recommended to be composed of key teachers with strong professional ability, outstanding language ability and necessary soft skills, who are mainly responsible for specific bilingual teaching tasks, development of bilingual curriculum resources and implementation of specific international cooperation projects. The support tier is mainly composed of newly promoted teachers or members with strong professional ability but with language ability to be improved, and their responsibilities are mainly to assist members of the executive tier in bilingual teaching, bilingual curriculum resource development and international cooperation project implementation. The tier division of team members is not static, but will be dynamically adjusted according to the development and improvement of individual business ability [4].

4 Bilingual Dual-Teacher Team Building

The first step in building a bilingual dual-teacher team is goal setting and career planning. Under the leadership of the core management members and the division of labor, the team members have their own responsibilities, and the first task is to carry out a comprehensive analysis of the needs of the industry. By studying the policies and regulations issued by the government on the internationalization of education and the construction of bilingual teachers, and by interpreting industry reports, we can understand the trend of industry development in terms of the demand for bilingual dual-teacher talents. The specific needs of enterprises for bilingual biliterate teachers can be obtained by distributing research questionnaires to enterprises, industry practitioners or customers, or conducting in-depth interviews with industry experts and enterprise leaders. Eventually, based on the information collected, revise and improve the demand for teaching positions in conjunction with the actual teaching and training programs to ensure that the team building is seamlessly connected with the industry demand.

On the basis of interpreting national policies, analyzing industry reports and market research results, and combining the revised job requirements and industry needs, the competency objectives to be achieved by team members should be determined. When formulating the competency objectives, the basic competencies of the team members should be taken into account, and a hierarchical formulation and reasonable decomposition should be carried out to ensure that the objectives are specific, quantifiable and operable.

Finally, team members should develop their own career planning paths according to the competency development goals, and make clear the methods and strategies for realizing the goals at each stage, so as to ensure that the enhancement of individual competency and the overall construction of the team can be promoted in parallel.

The second step in the construction of a bilingual dual-teacher team is the implementation of diversified training and development. The core of the team seeks to cooperate with relevant enterprises and foreign language training institutions according to the members' ability development goals and career planning paths, and helps members make detailed plans for professional skills and language ability improvement in

accordance with the established team building goals. The improvement of professional skills can be accomplished by participating in offline technical training or relying on the platform of school-enterprise cooperation to carry out spare-time or full-time internships, while the improvement of language ability can be accomplished by cooperating with professional foreign language training institutions, completing the assessment objectives of the enterprise in stages through the independent study of the online courses and the offline intensive training, and gradually realizing the foreign language and language ability requirements of team building.

In addition to customized training programs, members can also broaden their knowledge through cross-disciplinary independent learning. This includes attending various online network courses, participating in online forums, attending academic seminars, listening to academic reports from different industries, etc., to draw on knowledge in fields related to or complementary to their own specialties, and to further enhance their interprofessional and comprehensive abilities [5].

The third step in the construction of the bilingual bivocational team is the practice and feedback loop. In the teaching practice and application session, the core level of the team provides members with sufficient opportunities for teaching practice and other applications. According to the members' professional expertise and foreign language proficiency base, a teaching team is formed with members of the executive tier as the main members and members of the support tier as the auxiliary members, which undertakes the bilingual teaching in the professional classroom and the development of bilingual curriculum resources. In international cooperation and exchanges, the excellent members are given more opportunities to show their talents. Through these practical activities, members are able to continuously apply the knowledge and skills they have learned, and at the same time get feedback to further improve and enhance their abilities.

In the link of continuous improvement and adaptation, the core of the team must continuously adjust the team building strategy according to the changes in the external environment and the needs of internal development, and continuously explore and innovate the bilingual teaching methods and modes of teaching, so as to ensure that the team can always remain adaptable and forward-looking.

5 Bilingual Dual-Teacher Team Improvement

Continuous assessment and feedback is the key to promote team members to improve their business ability. The core of the team cooperates with enterprises to formulate detailed evaluation standards and implementation rules to comprehensively and multidimensionally assess members' professional ability, teaching effectiveness, language proficiency and practical achievements. Feedback information such as student evaluation, peer review, enterprise assessment and external experts' opinions are collected through multiple channels, so as to have a clear understanding of each member's performance and progress, adjust the training program in time, and promote the overall improvement of the team.

Dynamic adjustment of team structure is fundamental to enhance the adaptability and competitiveness of the team. According to the development status of the team and changes in members' abilities, the responsibilities and roles of members at the core, executive and support levels are adjusted in a timely manner, so as to make the best use of their talents and ensure the optimal allocation of resources. The final elimination mechanism is implemented to eliminate unqualified members and recruit new members. New members are assigned to different levels through the "personnel testing and evaluation" in the second step of the "bilingual dual-teacher team formation". The purpose of the dynamic team structure is to ensure that the team remains efficient and that the competencies of the members are always in line with the needs of the position.

Support and incentives are put in place, with core management helping team members to progress in their competencies and careers. Based on the problems identified in the performance appraisal and multiple feedback sessions, core management communicates with team members and partner companies to make timely adjustments to training plans and practice programs. For team members with outstanding performance, more opportunities are provided to participate in bilingual teaching, core curriculum resource development tasks, important projects or international cooperation projects. In addition, clarify the details of the requirements for bilingual dual-teacher competence in the evaluation of titles and promotion of positions to ensure that outstanding team members will be able to obtain the appropriate promotion opportunities and rewards after the assessment. For difficult members, personalized training and promotion plans are formulated to help them improve and grow gradually.

Building a resource sharing platform aims to improve the overall efficiency and collaboration of the team through resource sharing. The resource sharing platform can be completed in cooperation with an education technology company or a platform operation and maintenance company. The cooperating company needs to have an in-depth understanding of the overall structure of the team's construction, and be deeply involved in all aspects of the team's construction to ensure that the platform's design and functionality meet the team's requirements. The core of the team maintains close communication with the partner company and listens to the opinions of other team members in order to build a content-rich and reasonably structured resource library, and set up a user feedback mechanism to collect feedback from customers and members. At the same time, the innovative teaching methods and models in the "continuous improvement and adaptation" section are timely incorporated into the resource library to keep it optimized and updated.

6 Practical Exploration of Bilingual Dual-Teacher Team Construction

After completing the framework and path study for bilingual dual-teacher team construction, the Automotive Engineering Department of Beijing Electronic Science and Technology Vocational College began its practical exploration of bilingual dual-teacher team development in September 2021. The Dean of the department and the

school’s International Office led the initiative, interpreting national policies and the school’s internationalization development strategy. They conducted in-depth interviews with technical experts from industry partners, including Beijing Benz, Jaguar Land Rover, and FAW-Volkswagen, and distributed 100 questionnaires to graduates in automotive majors, receiving 71 responses. Based on the interviews and survey results, the team finalized the capability requirements for the bilingual dual-teacher team, as shown in Figure 2. Following capability assessments, a 14-member bilingual dual-teacher team was formed, consisting of the Dean and department heads as the core layer, highly skilled teachers with strong English proficiency as the execution layer, and new or technically strong teachers needing English improvement as the support layer.

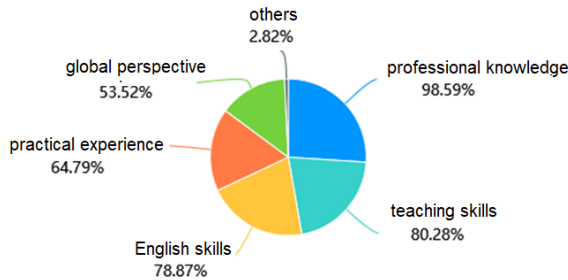


Fig. 2. Bilingual Dual-Teacher Capability Requirements Pie Chart

Then, in collaboration with Morgan International English Center, the college launched a blended training model combining online and offline learning. The online training, delivered through the Rosetta Stone platform, was taught by trainers from Europe, the Americas, or South Africa, offering flexible scheduling. The content covered over 150 topics, including professional conversations, medical English, legal English, and more. Offline training sessions were held during winter and summer vacations, focusing mainly on improving teaching methodologies and cross-cultural communication skills, led by a team of both domestic and foreign teachers. The participation data of teachers is shown in Table 1.

Table 1. Overview of Bilingual Dual-Teacher Team Members' Participation in Online English Training with Foreign Instructors

Number	Last Name	First Name	Number of lessons	Study time
1	Xia	Mark	2239	26:32:38
2	Wang	Emmy	1025	2:09:10
3	Zhang	Rosy	802	15:10:15
4	Chen	JieDY	317	3:36:54
5	Zhao	Chang	312	2:20:52
6	An	Ann	126	4:24:58
7	Chen	Veronica	106	4:09:18
8	Wang	Qiong	94	5:26:06
9	Shi	Sally	89	14:47:16

10	Sui	Plum	44	1:23:42
11	Wang	Xiaomi	17	1:55:01
12	Zhao	Jane	10	0:03:15
13	Wang	Max	9	0:04:02
14	Zhou	Julian	7	0:45:09

Organize teachers to participate in online and offline professional skills training or teaching capability enhancement programs, and attend part-time or full-time internships at relevant automotive companies. The participation data is shown in Table 2.

Table 2. Overview of Bilingual Dual-Teacher Team Members' Internship and Training Participation

Name of training program/enterprise	Number of participants	Lesson hours	Total hours
Baidu Zhixing Technology Company Limited (Corporate Internship)	5	68	340
Anlai (Beijing) Automotive Technology Research Institute (Corporate Internship)	7	32	224
China Society of Automotive Engineering (Corporate Internship)	6	42	252
Azure Research & Development Limited (Corporate Internship)	9	40	360
Beijing Benz Co. (Corporate Internship)	12	70	840
Industrial Robotics and New Energy Vehicle Technology International Program Training	14	30	420
National Institute of Education Administration/Teacher Capacity Enhancement Training	14	41	574
Summer Mercedes-Benz MT Technology Training	5	48	240
Beijing Benz MPS Lean Production Training	10	70	700
Beijing Benz New Technology Offline Training	12	48	576

Additionally, the college actively engages in international cooperation, employing diverse teaching methods such as classroom lectures, laboratory training, and project-based teaching to instruct students from Université Libre de Tunis, thus promoting the internationalization of bilingual dual-teacher education. Feedback is collected from international students regarding the content, learning methods, and environment of courses in automotive inspection and maintenance, helping to understand their expectations and needs for future career development. This information directly influences how we design bilingual proficiency and professional skills training for our teachers.

The school has revised the "Professional Technical Position Appointment Regulations" to include requirements for bilingual teaching and bilingual dual-teacher capabilities, and introduced eligibility criteria for teachers pursuing overseas study, encouraging them to advance in the field of bilingual education.

In collaboration with Beijing Benz and Morgan English Center, the school has developed a bilingual course resource library for automotive inspection and maintenance, including modules on "Automobile Construction," "Automotive Electrical and

Network Inspection," and "New Energy Vehicle Technology," enabling shared access to bilingual resources.

7 Summary

Through the selection, assessment, and tiered formation of a bilingual dual-teacher team, and through career planning, diversified training and development, and practical feedback, the team construction is completed. Finally, by implementing continuous evaluation and feedback, dynamically adjusting the team structure, establishing support and incentive mechanisms, and building a resource-sharing platform, the entire team is perfected^[6]. This series of measures will provide strong support for vocational undergraduate education in cultivating interdisciplinary international talents with professional skills, bilingual abilities, and a global perspective. Through school-enterprise cooperation and the integration of industry and education, the alignment of educational content with industry needs is ensured, continually improving educational quality and the team's adaptability^[7]. In practical exploration, continuous optimization of team development and teaching resources through cooperation with domestic and international enterprises and educational institutions contributes to international cooperation projects and the training of international students in countries along the Belt and Road.

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