

# Research on the Development of Chinese Language Micro-Specialties Based on Multi-Teacher Collaboration

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**How to cite this paper:** Cui, N., Zhou, H. M., & Zhang, Y. S. (2024). Research on the Development of Chinese Language Micro-Specialties Based on Multi-Teacher Collaboration. *Creative Education*, 15, 867-879. <https://doi.org/10.4236/ce.2024.155053>

**Received:** April 27, 2024

**Accepted:** May 27, 2024

**Published:** May 30, 2024

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## Abstract

Micro-specialties are an important exploration in the reform of education and teaching in universities. They are a set of courses and related practical teaching activities with a short period of study, fewer credits, and strong autonomy of universities, designed based on existing majors and combined with the needs of social development. Based on a literature review, this article believes that multi-teacher collaboration is necessary in the construction of micro-specialties, as it can effectively promote the construction and development of micro-specialties. The article then combs through the situation of language micro-specialties set up in Chinese universities in recent years, including training objectives, core courses, length of study, and credits. The main professional directions are distributed in fields such as language industry, language services, language intelligence, international Chinese education, and foreign language education. In addition to teaching, teachers from other majors or off-campus personnel should also participate in the formulation of training programs, curriculum system design, teaching methods selection, teaching quality evaluation, and other links, in order to better achieve multi-teacher collaboration and enhance students' comprehensive qualities.

## Keywords

Multi-Teacher Collaboration, Micro-Specialty, Language Studies, Comprehensive Qualities

## 1. Introduction

In September 2019, China's Ministry of Education issued the "Opinions on Dee-

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pening the Reform of Undergraduate Education and Teaching to Comprehensively Improve the Quality of Talent Cultivation”, pointing out the need to be oriented towards the needs of economic and social development as well as students’ career development, and to construct a professional setting management system that unifies autonomy, flexibility, and standardization and stability. It further emphasizes strengthening practical education, deepening the integration of production and education, and school-enterprise cooperation, to build a number of high-level applied universities that strongly support regional and industrial development. In January 2020, the General Office of the Ministry of Education issued the “Administrative Measures for the Collaborative Education Project between Industry and Education”, stating that the collaborative education project should actively serve the needs of national economic and social development, serve the needs of strategic emerging industries, encourage relevant enterprises not to aim for direct commercial benefits, deepen industry-university cooperation, promote the multi-party collaboration of training objectives, teaching staff, resource allocation, and management services, and cultivate high-quality professionals to support and lead economic and social development. In April 2024, the General Office of the Ministry of Education issued the “Notice on Further Improving the Work of Setting up Undergraduate Majors in Regular Institutions of Higher Education”, requiring the improvement of the mechanism for setting up and adjusting undergraduate majors, dynamic adjustment of nationally controlled majors and specially-set majors, and ensuring the quality of major settings. Universities should improve the internal quality assurance system for education and teaching, incorporate the setting and adjustment of majors into the school’s development planning, and conduct special research. These relevant policy documents have played a guiding and promoting role in advancing teaching reforms, including the establishment of micro-specialties.

A micro-specialty refers to a set of core courses offered by universities around a specific academic field, research direction, or core literacy, outside of students’ main majors. Through flexible and systematic training, students can acquire certain professional academic literacy and industry employment abilities in specific fields. In the process of setting up and actually teaching micro-specialty courses, teachers with different professional backgrounds often need to collaborate, and even personnel from enterprises may serve as off-campus mentors to co-teach with full-time faculty. Therefore, the proposal of the micro-specialty concept and its promotion in practice are either a preamble or a response to the aforementioned policy documents. Exploring the establishment and progress of micro-specialties in a specific professional field can provide a comparison of the similarities and differences among different universities’ practices, and, combined with practical results, offer insights for improving the establishment and development of micro-specialties. In light of this, based on a review of relevant theoretical literature, this paper investigates the practice of constructing micro-specialties in linguistics in China through methods such as document analysis,

online surveys, and comprehensive comparative analysis. It adopts qualitative analysis methods to study the intrinsic logical relationship between collaborative teaching and micro-specialty construction. Finally, it draws relevant conclusions and recommendations to facilitate the development of micro-specialties in linguistics in China.

## 2. Literature Review

The earliest literature containing the phrase “collaborative teaching” in its title appeared in 1991 in China (Liu & Zhang, 1991). Currently, multi-teacher collaborative teaching has become an important focus of educational reform. Academic discussions in this field have been continuously deepening. Quantitative analysis shows that the number of studies on multi-teacher collaborative teaching has been increasing continuously from 2003 to 2022, with fruitful research results that have positively promoted educational development (Zhou et al., 2023). Scholars have comprehensively elucidated the advantages of the multi-teacher collaborative teaching model and its implementation strategies from perspectives such as the relationship between subjects, teaching forms, and evaluation mechanisms. Additionally, factors such as knowledge sharing and cost-effectiveness are considered key internal mechanisms influencing interdisciplinary collaborative teaching, and the relevant promotion mechanisms are worth in-depth discussion (Liu, 2018). Moreover, multi-teacher collaborative teaching presents diversified practical paths under different disciplinary backgrounds. In public computer courses at universities, the dual-teacher collaborative teaching model aimed at cultivating students’ information literacy has received attention (Chen, 2019). Based on the requirements of engineering professional accreditation, the graduation design model of school-enterprise collaborative cultivation has also been valued by the academia (Wang et al., 2024). The effective implementation of interdisciplinary teaching also needs to rely on the effective integration of knowledge structures and ways of thinking (Liu, 2018). Furthermore, multi-teacher collaborative teaching involves multiple subjects such as professional teaching teams, students, and part-time teachers. The evaluation of its teaching effects and influence mechanisms deserve further research (Chen, 2024). Some scholars have emphasized the important role of teacher professionalization in this process, believing that collaborative teaching is conducive to improving teaching quality and promoting teachers’ professional development (Meng et al., 2022; Yang, 2023). In summary, multi-teacher collaborative teaching has become a key issue in the teaching reform of universities. In the future, it is necessary to further innovate the forms and contents of collaborative teaching and improve the relevant support systems to better meet students’ needs and improve the quality of talent cultivation.

The earliest literature containing the phrase “micro-specialty” in its title appeared in 2014 in China (Jiang et al., 2014). Professional education in university construction has the characteristics of subtlety, flexibility, and openness, which

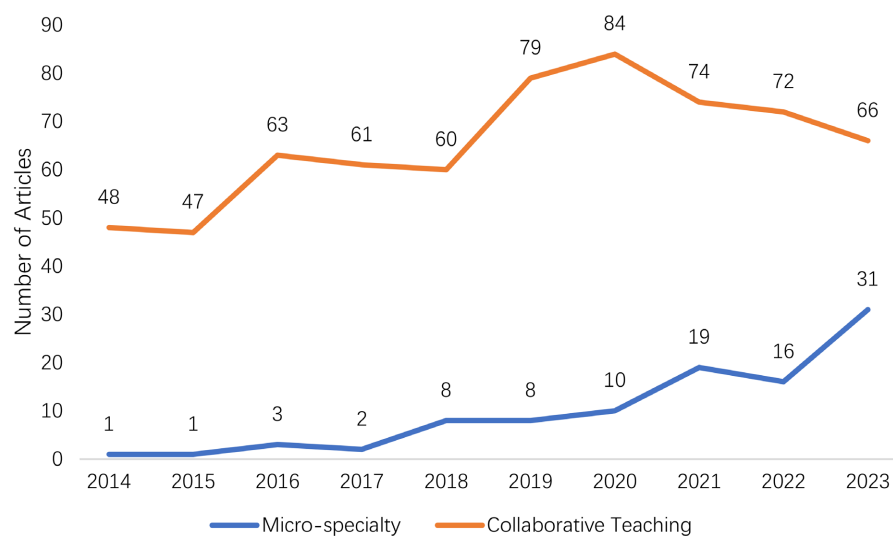
plays a positive role in promoting knowledge innovation, advancing professional teaching reform, and promoting the development of teachers and students (Qin & Chen, 2023). The goal of micro-specialties is to cultivate compound innovative talents. This educational model can make up for the deficiencies of the traditional talent training model and play an important role in employment orientation. Existing literature has introduced the practical exploration of micro-specialty teaching reform in the accounting major at D University, which has achieved good results (Chen et al., 2021). Additionally, micro-specialties also contribute to cultivating talents with an international perspective by changing the traditional teaching mode and enhancing practical application abilities, improving students' competitiveness (Guo, 2023). However, in the construction of micro-specialties, there are still some difficulties, including insufficient demand analysis, unclear goal orientation, limited resources, inadequate teacher training and support, and imperfect evaluation and recognition mechanisms (Yang & Sun, 2024). In the development of micro-specialties, principles such as multi-party collaborative cultivation, empowering student learning, and interdisciplinary integration should be followed to achieve high-quality development of micro-specialties (Qin & Chen, 2023). Currently, the construction of micro-specialties has made significant progress in many disciplines. For example, micro-electronics, finance, and other majors have carried out explorations and reforms in teaching practices to improve students' employability (Wang & Wang, 2024; Xu et al., 2023). At the same time, emerging majors such as digital marketing, rail transit signaling and control are also constantly developing, proving that micro-specialties can make up for the deficiencies of traditional courses and provide more practical, integrated, and professional education (Wang et al., 2019; Huang et al., 2023). Even disciplines with practical significance, such as forensic dentistry, are starting to be considered (Clement et al., 2018). In the future, universities can rely on school characteristics and social needs to carry out the construction of interdisciplinary "AI+X" micro-specialties and cultivate big data application-oriented talents with professional abilities in certain fields (Liu, 2024). Additionally, there are other micro-specialties with broad development prospects, such as "BeiDou + X" (Xing et al., 2024). "BeiDou+X" deeply integrates BeiDou technology with emerging technologies such as big data, the Internet of Things, and artificial intelligence, providing flexible and systematic training for learners, enabling them to acquire academic professional qualities and industry employment abilities in this field. In general, micro-specialties provide new ideas for professional construction and talent cultivation in universities, receiving widespread attention and practical exploration. In the future, it is necessary to further improve the construction mechanism of micro-specialties and enhance their educational quality and social impact.

In the past decade, the overall trend of domestic papers on collaborative teaching and micro-specialty construction has shown an upward trend, with micro-specialty construction becoming an increasingly concerning issue (Figure 1). Dis-

cussing the effective integration of multi-teacher collaborative teaching and micro-specialty construction is of great significance for the innovation of talent training models in universities. Micro-specialties emphasize practicality and applicability, requiring the integration of theoretical knowledge and practical skills. In this context, multi-teacher collaborative teaching can provide support for the curriculum design of micro-specialties. Through joint teaching by interdisciplinary teachers, the teaching team can better adapt to industry needs, enhance the pertinence and effectiveness of the curriculum, and cultivate students' practical abilities and problem-solving abilities. At the same time, the construction of micro-specialties involves multiple stakeholders such as schools, enterprises, and industries. How multi-teacher collaborative teaching can effectively integrate internal and external resources, and establish a school-enterprise-industry collaborative talent cultivation mechanism for micro-specialty construction, is also a focus worth attention. Furthermore, micro-specialties emphasize students' individualized development. Multi-teacher collaborative teaching can provide guidance and feedback from different disciplinary backgrounds for students, helping them better discover and develop their potential, achieve individualized growth, and meet students' individualized learning needs. Therefore, this paper focuses on the practical construction of micro-specialties in Chinese linguistics, exploring the application of multi-teacher collaborative teaching in micro-specialty construction, aiming to provide new ideas and practical paths for the construction of micro-specialties in linguistics, and promote the innovative development of talent training models in universities.

### 3. Practice of Constructing Micro-Specialties in Linguistics

In 2018, Peking University's School of International Studies launched the online micro-specialty "International Organizations and Global Governance", and Nishan Academy of Shandong University launched the online micro-specialty "Classical



**Figure 1.** Changes in the number of domestic literature on micro-specialties and collaborative teaching over the past decade.

Literature”, which were among the earliest officially launched online micro-specialties in the country. After that, the construction of micro-specialties in linguistics also flourished. The information on the construction of linguistics micro-specialties presented in this paper is mostly compiled and compared based on the content disclosed on their official websites.

The language industry refers to production and distribution activities conducted with language as a commodity. For example, producing and distributing various kinds of language textbooks, audio tapes, video tapes, holding language training classes, etc. The language industry has not yet been officially categorized as an industry and included in China’s national economic statistics system, but some industries providing language products or related content services are developing rapidly. Against this backdrop, in 2021, the School of Cultural and Communication at Shandong University established the “Language Industry” micro-specialty. The goal is to enable learners to effectively extend and gain in-depth cognition and connection beyond the overly specialized disciplinary knowledge system based on their major studies, through the cultivation of Chinese language and character literacy and the teaching of the knowledge system required by industries closely related to language. After completing this micro-specialty, students will be able to adapt to a wider range of job positions and have the advantage of language and text sensitivity thinking. Core courses include Introduction to the Language Industry, Language Economics, International Communication of Chinese, Language Policy and Planning, Language Anthropology and Language Typology, Corpus and Language Information Engineering, etc. The study duration is 1.5 years, and students who complete all courses and earn 16 credits can obtain a micro-specialty certificate issued by the university<sup>1</sup>.

Language service refers to various services provided to meet social language needs by utilizing languages, language products, and language technologies. In 2023, Hebei Minzu Normal University established the “Language Service” micro-specialty, aiming to cultivate new liberal arts compound, applied, and innovative language service and management talents who master basic knowledge of applied linguistics, possess solid language expression abilities, good language analysis and communication abilities, stable psychological qualities, proficient language information processing abilities, and business operation and management abilities, qualified for positions in voice services, e-commerce services, language informatization processing and dissemination, as well as relevant positions in government agencies and enterprises. Main courses include Standard Mandarin and Artistic Pronunciation, Verbal Communication Art, Standard Mandarin Proficiency Test Training, Language Psychology and Language Emergency Handling, Applied Psychology Practices, Enterprise Management and Corporate Culture, Basic Skills for Language Service Positions, etc. The study duration is 1.5 years, and students who earn 16 credits within the specified period

<sup>1</sup>Admission Prospectus for the “Language Industry” Micro-specialty at the School of Cultural Communication, <https://whcb.wh.sdu.edu.cn/info/1070/6645.htm>, 2021.4.

will receive a completion certificate issued by the university<sup>2</sup>.

Language intelligence refers to the intellectualization of language information, which is the science of imitating human intelligence using computer information technology to analyze and process human language (Peng, 2017). In 2023, the School of Information Science and Technology (School of Cyber Security) at Guangdong University Of Foreign Studies established the micro-specialty named “Language Intelligence”. It aims to enable students to learn and master artificial intelligence-related technologies and methods integrated with linguistics knowledge, master methods for acquiring, analyzing, and processing various forms of data such as texts, learn and master the basic ideas and methods of program development, understand and master the basic tasks and methods of natural language processing, and cultivate students’ computational thinking abilities, innovation abilities, and abilities to analyze and solve problems through case-based learning, hands-on practice, and other approaches. Courses include Data Collection and Analysis Technology, Python Programming, Fundamentals of Natural Language Processing, Fundamentals of Artificial Intelligence, Text Information Processing Case Analysis, and Corpus Construction and Application. The program duration is 1 year, and students who earn 12 credits within the specified period can obtain a certificate<sup>3</sup>.

International Chinese Education refers to education for learners of Chinese as a second language. In 2023, the School of Foreign Languages and Literatures at Chongqing University of Education released the enrollment information for the “International Chinese Education” micro-specialty, intending to cultivate three main abilities for students through around 1 year of training: First, Chinese teaching ability. Love international Chinese education, possess basic knowledge of Chinese linguistics and language analysis ability, and can conduct effective Chinese teaching and classroom management for non-native Chinese learners. Second, cross-cultural communication ability. Be familiar with Chinese culture and the cultures of countries along the Belt and Road, and can communicate and cooperate well with teaching objects, peers, and other relevant personnel from various cultural backgrounds. Third, English proficiency. Use English proficiently for communication in formal and informal settings, and carry out education and teaching activities. Main courses include Modern Chinese, Introduction to International Chinese Education, etc. The theory module utilizes high-quality resources such as Chinese University MOOCs and Chinese MOOCs for blended teaching, while the practical module mainly uses online teaching platforms for live streaming, with regular offline exchanges and practical teaching. The study duration is 1 year, and 5 courses totaling 20 credits are offered focusing on the core competencies for international Chinese education talents. Students who earn the required credits within the specified period can obtain a micro-specialty

<sup>2</sup>Admission Prospectus for the Language Service Micro-specialty at Hebei Ethnic Normal University, <https://www.hbun.edu.cn/jwc/info/1063/2772.htm>, 2023.9.

<sup>3</sup>2023 Admission Work Plan for the Language Intelligence Micro-specialty, <https://sist.gdufs.edu.cn/info/1196/7289.htm>, 2023.5.



certificate<sup>4</sup>.

Foreign language education is a typical interdisciplinary and compound talent training specialty, offered for various foreign language majors. In 2023, Heilongjiang University established the “Foreign Language Education” micro-specialty, aiming to cultivate students’ practical ability to conduct basic teaching activities in foreign languages, laying the foundation for students to engage in foreign language education-related work in basic education schools after graduation, and providing strong support for further study and development. Through learning the courses in this specialty, students can master basic knowledge related to foreign language education, ensuring their future career development and academic ability enhancement. Cultivated abilities include understanding the basic principles of education and educational psychology, understanding the basic laws of second language acquisition and teaching, understanding the basic knowledge of educational evaluation and language testing, understanding the basic theories of educational technology, and mastering basic teaching methods and techniques. Main courses include Principles of Education, Educational Psychology, Educational Evaluation, Introduction to Educational Technology, Introduction to Applied Linguistics, and Second Language Acquisition. The program duration is 1 year, and students who earn 15 credits within the specified period can obtain a certificate<sup>5</sup>.

In addition, many other universities have also launched other micro-specialties in linguistics, such as the “Film and Television Media English” micro-specialty at Lanzhou University of Arts and Science, the “Advanced English-Chinese Interpretation”, “International News and Foreign Affairs English”, and more at Shenzhen University.

From the above practice, the direction of Chinese language micro-professionalism is relatively comprehensive, with clear cultivation goals and obvious social demand orientation, and the requirements in terms of credits and academic system have basically reached a consensus. The concept of “collaborative teaching” has appeared earlier and is relatively mature in practice, but how to apply multi-teacher collaboration to the construction of micro-professions is still one of the challenges in the subsequent construction of micro-professions, so it is necessary to further theoretically clarify the relationship between the two and the feasibility and necessity of their combination.

## **4. Integration of Multi-Teacher Collaboration and Micro-Specialty Construction**

### **4.1. The Connotation and Positioning of Micro-Specialties Determine the Necessity of Multi-Teacher Collaboration**

Micro-specialties provide more diverse interdisciplinary course resources for

<sup>4</sup>Introduction to the International Chinese Education Micro-specialty, <https://www.cque.edu.cn/wyx/info/1214/6994.htm>, 2023.6.

<sup>5</sup>Talent Cultivation Program for the [Foreign Language Education] Micro-specialty, <https://jwc.hlju.edu.cn/info/1987/6420.htm>, 2023.3.



students with spare capacity, supporting them in broadening their horizons, cultivating interdisciplinary thinking, and enhancing social competitiveness. The principles for setting them up generally require a high degree of alignment between the training objectives and realistic social needs, as well as the ability to quickly meet the skill requirements for a particular field or position. Therefore, a micro-specialty can be a high degree of focus on an existing undergraduate major around a specific field, job competency, research direction, or core literacy. More importantly, it should be an emerging cross-disciplinary field with high social demand that is not included in the existing undergraduate major catalog. Relevant enterprise personnel have more practical experience and familiarity with market needs, so it becomes necessary to introduce off-campus personnel as student mentors or instructors.

#### **4.2. Forms of Multi-Teacher Collaboration in the Construction and Development of Micro-Specialties**

Whether from existing theoretical literature or the above micro-specialty construction practices, the construction process of micro-specialties often requires the participation of multiple teachers. One scenario involves multiple teachers from within the school, who may be from the same major or across disciplines and majors. Another scenario involves not only teachers from within the school but also off-campus personnel, such as those from relevant enterprises. For example, when Beijing University of Technology established micro-specialties, it emphasized the integration of theoretical teaching and practical training, explicitly stipulating the importance of school-enterprise collaboration and the integration of production and education by inviting enterprise personnel to participate in teaching. Beijing Union University's micro-specialty construction plan also proposed following a path emphasizing cross-integration and joint cultivation, by constructing professional clusters, offering interdisciplinary course groups, building interdisciplinary talent cultivation platforms, and deepening school-enterprise collaborative talent cultivation mechanisms, among other measures, to ensure resource sharing, joint exploration of models, and quality improvement, thereby promoting the organic connection between the education chain, talent chain, industry chain, and innovation chain.

#### **4.3. Multi-Teacher Collaboration can Effectively Promote the Construction and Development of Micro-Specialties**

In the collaborative teaching process, the task of each instructor is relatively independent, but they need a high degree of coordination and must work in concert to achieve their common goals. Team members need good communication and coordination abilities to ensure that everyone understands their tasks and the team's overall objectives. Additionally, the division of labor among team members should be clear to avoid redundant work and resource waste, while also promoting communication and coordination among team members to achieve synergy within the entire team. An effective multi-teacher collaborative teaching model will

greatly facilitate the construction and development of micro-specialties.

## 5. Conclusion and Discussion

### 5.1. Conclusion

First, micro-specialties are an important measure in the reform of undergraduate education and teaching, with the main purpose of cultivating talents that are more suitable for current social needs. Micro-specialties are based on the talent needs of economic and social development, revolving around a specific professional field, research direction, or core literacy, taking different disciplinary knowledge and skill provision as the starting point, interdisciplinary integration as the breakthrough point, and industry talent needs as the foothold, to distill and offer a set of core courses. Micro-specialties generally rely on a major while integrating other related majors, combining specific industry needs, and setting up a reasonable curriculum system.

Second, micro-specialties differ from traditional undergraduate majors, with schools having greater autonomy. Micro-specialties are offered outside the Ministry of Education's undergraduate major catalog, without degree certificates, only qualification certificates issued by the school. Therefore, they are also different from double degrees, second degrees, or minor degrees. Schools have full autonomy in whether to offer micro-specialties, their names, program length, credits, curriculum system, team building, and teaching implementation. The credit requirements for micro-specialties are often much lower than those for regular undergraduate majors. Some universities stipulate that if students do not complete all courses in a micro-specialty, although they cannot obtain a micro-specialty completion certificate, the credits they have earned can be used to substitute for general education elective credits. This shows that micro-specialty courses are benchmarked against general education electives to a certain extent, rather than major required courses.

Third, in recent years, the number of Chinese micro-specialties in linguistics has been increasing, mainly in areas such as the language industry, language services, language intelligence, international Chinese education, and foreign language education. The overall characteristic is to derive new micro-specialties based on linguistics and social needs. For example, the language industry based on digital technology has become an emerging industry vying for development in various countries in recent years. The integration of language and digital technologies such as artificial intelligence, big data, and cloud computing has nurtured new models and ecosystems, incubating new types of language industries and changing the competitive landscape. Against this backdrop, micro-specialties like the language industry, language services, and language intelligence have emerged.

### 5.2. Discussion

Micro-specialties are an important means of reshaping the organizational form

of education and teaching according to the latest social needs, complementing traditional undergraduate majors. Adequate exploration and corresponding achievements have been made on both theoretical and practical levels. However, overall, micro-specialties themselves are still a new phenomenon, with many aspects needing further strengthening and improvement. The quality of micro-professionalism and teaching is yet to be tested in practice. Whether the setting and teaching quality of micro-professionalism can really meet the needs of social and economic development has yet to be tested by the later practice, therefore, in the process of micro-professionalism construction, it is also necessary to more accurately grasp the needs of the society and the corresponding scientific and reasonable cultivation mode, including the scope of enrollment, the selection criteria, the course curriculum, the team formation, the mode of instruction, the assessment standards and other aspects. The contents that need to be further clarified include: in constructing a multi-teacher collaboration model that has an important impact on promoting micro-specialty construction and its actual effectiveness, not only should teachers from other majors or off-campus personnel participate in teaching, but they should also participate in formulating the training program, setting up the curriculum system, teaching methods, teaching quality evaluation, and other aspects, to better achieve multi-teacher collaboration and thereby enhance students' comprehensive qualities and abilities. Additionally, innovative evaluation mechanisms with more flexible and diverse assessment and evaluation standards should highlight the diversity of assessment content and the flexibility of assessment methods. For instance, students publishing high-quality papers, winning awards in relevant disciplinary or professional skill competitions, obtaining invention patents in relevant fields, participating in major research projects, etc., can all serve as assessment standards for micro-specialties and evaluation of talent cultivation effectiveness. Furthermore, complex and innovative talents should be cultivated using technological means, by applying modern educational theories and modern information technologies, such as MOOCs, virtual teaching and research rooms, and other digital platforms, to optimize teaching and learning processes and educational resources through the design, development, utilization, evaluation, and management of these processes and resources.

### **Fund**

This research was funded by 2021 Annual Education Teaching Research and Reform Project of Beijing Union University (Grant No. JY2021Z001).

### **Conflicts of Interest**

The authors declare no conflicts of interest regarding the publication of this paper.

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