

Thoughts on Cultivation of Top-notch Innovative Talents of Food Subject in Local Universities

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Abstract The cultivation of top-notch innovative talents is one of the most prominent tasks in China's universities in the new era, and also an opportunity and challenge for local universities. Taking the food subject of local universities as an example, some suggestions were put forward from the aspects of security measures, teacher team construction, talent selection and management, and talent cultivation, in order to provide reference for the exploration and practice of cultivating top-notch innovative talents in the food subject of local universities.

Key words Local universities; Top-notch innovative talents; Talent cultivation

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According to the report of the 20th National Congress of the Communist Party of China, we must regard science and technology as our primary productive force, talent as our primary resource, and innovation as our primary driver of growth; we will fully implement the strategy for invigorating China through science and education, the workforce development strategy, and the innovation-driven development strategy; we will open up new areas and new arenas in development and steadily foster new growth drivers and new strengths. Talent, especially top-notch innovative talents, are the key factors determining the success or failure of national and regional competition now and in the future, and thus strengthening the cultivation of top-notch innovative talents is one of the most prominent tasks in Chinese universities in the new era^[1]. Top-notch innovative talents refer to various types of innovative talents including applied talents, research talents, and compound talents^[2]. In this article, top-notch innovative talents refer to reserve talents with good academic development potential and lofty aspirations, high comprehensive quality, strong innovation ability, and the potential to become elites in related industries or fields in the future.

The food subject has been established for nearly a hundred years in China and now includes 12 related majors including food science and engineering, food quality and safety, food engineering, dairy engineering, food nutrition and inspection education, food safety and testing, *etc.* According to statistics, there are currently 388 undergraduate universities and 409 colleges in China (excluding Hong Kong, Macao, and Taiwan) offering food related majors, most of which are local universities^[3]. In recent years, China's food subject has developed rapidly, but there is still a certain gap compared to developed countries in terms of high-level talents, major original achievements, and innovative and high technology^[4]. High quality talents of food subject with innovative spirit and ability are the core driving force for promoting the mod-

ernization of China's food industry, and also an important support for achieving "Healthy China" strategy for making China strong^[5]. As the main force in cultivating talents in the food subject, local universities, especially high-level ones, should take the initiative to take responsibility and cultivate top-notch innovative talents for the healthy development of the food subject.

Current Situation of Cultivating Top-notch Innovative Talents in Food Subject in Local Universities

From the definition of top-notch innovation in this article, high-level research-oriented universities will inevitably become the main battlefield for cultivating top-notch innovative talents with their source of students and disciplinary advantages^[1]. For example, Southwest University has established an innovation experimental class, which has conducted a series of beneficial explorations in cultivating high-level innovative talents in the field of food science^[4]. Local universities usually take it as their responsibility to cultivate high-quality applied talents that meet the needs of regional social, economic, scientific and technological development, and there is a certain gap with the high-level universities in terms of student resources, faculty scientific research and funding^[6]. In recent years, many local universities have made significant progress in scientific research, teaching staff, and experimental platforms. More and more local universities have established provincial-level scientific research platforms, master's and doctoral degree programs, and postdoctoral mobile stations. Some local universities also have strong teaching staff such as academicians, Changjiang scholars, and national elites. These high-level local universities fully possess the software and hardware foundation for educating and cultivating top-notch innovative talents^[7-8]. In terms of the food subject, although Hubei University of Technology has conducted a series of explorations in cultivating elite and high-level innovative leading talents^[9], currently there is relatively little exploration and practice in local universities on cultivating top-notch innovative talents in the food subject. Local universities, especially high-level local universities with food subject as the

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preponderant discipline, should seize opportunities, be brave in taking responsibility and actively explore top-notch innovative talent cultivation models suitable for their own development trends and characteristics in the food subject.

Suggestions for Cultivating Top-notch Innovative Talents in Food Subject in Local Universities

Rely on preponderant discipline to strive for school level support and guarantees

The exploration of top-notch innovative talent cultivation models is a long-term task that requires attention, support, and guarantee from the school level^[6]. There is a certain gap between local universities and high-level universities in terms of teaching resources, education experience, and subject construction. The cultivation of top-notch innovative talents cannot copy others' model, and exploring and practicing based on its own advantages and unique disciplines is crucial^[10]. Therefore, although many local universities offer food subject related majors, not all schools have the foundation for cultivating top-notch innovative talents. Local universities with food subject as the preponderant discipline, especially those with master's degree programs, have certain advantages in terms of student resources, faculty, scientific research level, and conditions, and have a foundation for cultivating top-notch innovative talents. For these local universities, the food subject should rely on their own advantages, refine their disciplinary characteristics and directions, actively strive for the unanimous attention of the school's decision-making, management, and execution levels, unify thinking and force, and provide support and guarantees in policies, organizational management and resource allocation, so as to jointly promote the cultivation of top-notch innovative talents.

Integrate internal and external resources to create a high-level teaching team

Teachers are the foundation of education, and the cultivation of high-level talents requires high-level teaching staff. Local universities should first select the best among the existing teaching staff in the field of food science, and create a high-level teaching team composed of renowned teachers, professors with provincial or above academic titles and research elites with high professional and educational titles. The age, education, and professional title structure should be reasonable, and the disciplinary background should be solid. Efforts should be actively made to organize and support food subject teachers to pursue further education in well-known universities and research institutions both domestically and internationally, carry out research cooperation and exchanges, and further enhance their own research level and international perspective. At the same time, local universities can also adopt the method of "attracting foreign talents" to gather domestic and foreign talent resources. For example, through the forms of introducing high-level talents, appointing distinguished professors, and employing part-time teachers, much efforts should be made to vigorously introduce well-known experts and scholars from both do-

mestic and foreign countries such as food academicians, Changjiang scholars, outstanding young people, and industry "experts" to share with students the international cutting-edge knowledge and research trends of the subject, their in-person scientific research experience and life insights by means of classroom teaching, academic salons and academic lectures, thus stimulating students' thirst for knowledge and innovation potential.

Optimize talent selection and management mechanisms to ensure the quality of student resources

Due to limited teaching resources and conditions, local universities generally adopt a small class teaching system to cultivate top-notch innovative talents. The screening and selection of talents is crucial for their cultivation quality. Top-notch innovative talents in the field of food science should possess excellent qualities such as patriotism, advocating science, seeking truth and pragmatism, practicing innovation, and pursuing excellence. They should have good academic development potential and ambitious life ideals, and have the willingness to enter well-known universities and research institutes both domestically and internationally for further education. In order to ensure the quality of students, comprehensive evaluation of students should be carried out using written examination, interview, psychological test and other ways. In the selection process, a comprehensive assessment should also be conducted on students' ideological and moral character, academic performance, psychological and physical fitness, interest in food subject learning, communication and expression abilities, analytical and problem-solving abilities and other aspects to comprehensively understand their comprehensive literacy and value pursuit. In the process of cultivating top-notch innovative talents, dynamic entry and exit mechanisms can be adopted to stimulate students learning initiative. Each university should formulate personnel allocation and supplementation measures based on its own situation, clarify relevant requirements and processes.

Innovate talent cultivation mode to highlight the cultivation of scientific and technological innovation ability

Optimize talent cultivation programs and improve management systems Local universities should optimize the structure of talent cultivation programs based on the characteristics and advantages of their own food subject and highlight the cultivation of students' innovative awareness and ability. At the same time, the food subject should form clear institutional documents on the selection of top-notch innovative talents, class management, mentor management, diversion and supplementation, credit recognition, incentive and guarantee measures based on the recognition and support of schools and combined with its own actual situation, to provide basic guarantees for the cultivation of top-notch innovative talents.

Adopt "two-phase" training approach to promote personalized development With students as the center and personalized development as the guide, more flexible learning space should be offered in the first two years of basic education; the learning environment should be optimized in an all-round way; attention should be paid to cultivating students' innovative awareness and scientific literacy, so as to build a diversified knowledge structure. Starting

from the third academic year, professional mentors will strengthen the cultivation of students' research abilities and experimental skills based on their interests.

Teach by renowned teachers and experts to ensure teaching quality Relying on the strength of subject teachers, the allocation of teachers should be optimized and strengthened. It should hire renowned teachers from schools, professors with provincial-level or above academic titles and cutting-edge scientific researchers with high professional titles and educational qualifications to give lectures, and at the same time actively invite well-known experts and scholars from both domestic and foreign food subject to enter students' classrooms. Efforts should be made to give full play to the rich teaching experience, profound knowledge, and strong professional skills of renowned teachers and experts, to ensure high-quality course teaching.

Innovate educational and teaching methods to stimulate learning initiative The course teaching should be conducted in the form of teaching teams, with careful design of teaching content, discussion methods, literature review, and homework assignments. Bilingual teaching is encouraged in some basic courses in certain majors. Teaching methods such as "teacher-student interaction", "teacher-student interaction" and "student-student interaction" should be adopted to break through the old-fashioned teaching methods such as "teachers' dictatorial teaching" and "cramming" Teaching, so as to achieve mutual learning and stimulate students' learning initiative and creativity.

Implement "pre-graduate" mentor training to strengthen research and innovate on capabilities According to the principle of "dual selection between teachers and students", each student is equipped with a master's supervisor in the food subject with strong professional foundation and outstanding scientific research achievements as their professional supervisor, to carry out preparatory graduate training. Systematical guide is offered to students from academic ideas, experimental skills, thesis writing and other aspects to ensure the training quality of students' scientific research innovation ability. Professional mentors are encouraged to provide research training to students based on their own research projects, in order to further enhance students' innovative qualities and creative abilities.

Personalize "research-competition-innovation" to enhance scientific and technological innovation capabilities Guided by the innovation and entrepreneurship projects of college students and subject competitions such as the "Science and Technology Innovation Cup", professional mentors develop personalized science and technology innovation training plans for students based on their research interests, strengthen guidance on scientific research thinking, experimental skills, and paper writing, organize and guide students to condense their research achievements and participate in various subject competitions, fully tap into students' academic potential, stimulate academic ideals and enhance their science and technology innovation abilities.

Conclusion

China's food industry is facing industrial upgrading, which has put forward more and higher requirements for food production with quality, safety, nutrition, health and low-carbon environmental protection. It requires a large number of top-notch innovative talents in the food industry to invest in the food industry. The cultivation of top-notch innovative talents is not the "patent" of high-level research-oriented universities, and local universities should also bravely seize opportunities and meet challenges. As the main force in cultivating talents in the field of food science, especially local universities where food science is the preponderant discipline, efforts should be made to combine their own disciplinary characteristics and advantages, integrate internal and external resources, actively explore and practice differentiate development, so as to make continuous improvement and forming a top-notch innovative talent cultivation model with unique characteristics in the field of food science that meets their own development needs.

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