Construction of Local Ecological Circle for High Quality Training of Food and Drug Testing Talents in Vocational Schools

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Abstract: This article aims to build a high-quality local ecological circle, so as to improve the training quality of food and drug testing talents in vocational schools. Therefore, this article deeply analyzes the current situation of personnel training in food and drug testing specialty in vocational schools, and reveals the existing problems and shortcomings. Based on the concept of "ecosystem" in ecology, this article puts forward a theoretical framework for the construction of local ecological circle, and expounds in detail the roles of government, schools and enterprises in the ecological circle, as well as the practical mode of school-enterprise cooperation and integration of production and education. The results show that this strategy can significantly improve the training quality of food and drug testing talents in vocational schools and make them better adapt to market demand. This study not only provides specific improvement direction for vocational schools, but also provides paths and suggestions for the government and enterprises to participate in talent training.

1. Introduction

With the rapid development of social economy, food and drug safety has been paid more and more attention by all walks of life. As the cradle of cultivating professional talents, vocational schools shoulder an important mission in the field of food and drug testing [1]. However, at present, there are still many shortcomings in the training of food and drug testing talents in vocational schools, which is difficult to meet the industry's demand for high-quality talents [2]. Therefore, it is particularly important to build a high-quality local ecological circle to improve the training quality of food and drug testing talents in vocational schools [3]. This research not only helps to improve the teaching quality and personnel training level of vocational schools, but also provides a strong talent guarantee for the healthy development of the food and drug industry.

At present, the research on the cultivation of food and drug testing talents in vocational schools has achieved certain results. Scholars have discussed ways and methods to improve the quality of personnel training from different angles, such as optimizing curriculum, strengthening practical teaching and promoting school-enterprise cooperation [4-6]. However, the existing research mostly focuses on one aspect of improvement, lacking a systematic perspective of ecosystem construction. The purpose of this study is to build a high-quality local ecological circle, so as to improve the training quality of food and drug testing talents in vocational schools. The research contents include: analyzing the current training situation of food and drug testing talents in vocational schools, discussing the theoretical framework and practical path of local ecological circle construction, and putting forward specific construction strategies and measures.

2. Present situation of training talents of food and drug testing in vocational schools

With the increasing attention of society to food and drug safety, the specialty of food and drug testing in vocational schools has developed rapidly. At present, more and more vocational schools offer food and drug testing majors, aiming at cultivating outstanding talents with professional skills and professionalism [7]. However, there are still some problems and challenges in the actual teaching process. Table 1 specifically lists the main problems and challenges faced by the food and drug testing major in vocational schools in the teaching process, aiming at helping educators and

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managers better understand and deal with these challenges, so as to improve the teaching quality and personnel training level.

Table 1 Teaching issues and challenges of food and drug testing in vocational schools

Problems and challenges	Specific description
Insufficient instructional resources	Limited laboratory equipment, teaching materials and other resources, it is difficult to meet the growing teaching needs.
The practice teaching is weak.	The proportion of practical teaching is insufficient, so it is difficult for students to improve their skills through practical operation.
The curriculum is out of line with the market demand.	Existing courses may not closely follow the development trend of the industry, resulting in the mismatch between students' skills and market demand.
Lack of teachers	The shortage of professional teachers with rich practical experience and teaching ability affects the teaching quality.
School-enterprise cooperation is not deep enough.	The cooperation between schools and enterprises needs to be strengthened in order to provide more internship and employment opportunities for students.
Lack of innovative teaching methods	Traditional teaching methods may not fully stimulate students' interest in learning and innovative ability.
Insufficient cultivation of students' practical ability	Besides classroom teaching, students lack enough practical opportunities to consolidate and apply what they have learned.
The assessment and feedback mechanism is imperfect	The assessment and feedback of students' learning achievements are not timely and comprehensive enough to guide teaching improvement.

The talent training goal of food and drug testing specialty in vocational schools is mainly to cultivate high-quality talents with food and drug testing skills and professionalism. In terms of curriculum, vocational schools have set up related courses including food and drug detection technology, food safety regulations, food nutrition and health according to their own actual situation and industry needs [8]. However, due to the low fit between the curriculum and the market demand, the employment competitiveness of graduates is limited. Practice teaching is an important link to improve the skill level of students in vocational schools. At present, although many vocational schools have arranged practical teaching and practical training, the effect of practical teaching is not ideal because of insufficient equipment investment, limited practical teaching time and low participation of enterprises. This has affected students' skills upgrading and career development to some extent.

In the process of cultivating talents of food and drug testing in vocational schools, there are mainly the following problems: the curriculum is out of line with the market demand, which leads to the inconsistency between the knowledge and skills learned by students and the actual job requirements; The practice teaching link is weak, and students' practical ability can not be effectively improved; Lack of in-depth cooperation with enterprises makes it difficult for students to get in touch with the real professional environment; The shortage of teachers restricts the improvement of teaching quality. In view of these problems, this article will put forward specific solutions and measures from the perspective of building local ecological circle.

3. Theoretical framework and practical exploration of local ecological circle construction

The local ecological circle refers to the interdependent and mutually promoting symbiotic system formed by the government, schools, enterprises and other parties in a specific region. This theory is mainly based on the concept of "ecosystem" in ecology, emphasizing the interaction and balance among the subjects. In the local ecological circle, the government plays the role of policy guidance and support, and promotes the cooperation between vocational schools and enterprises by formulating relevant policies and providing financial support, and promotes the docking of talent training and industrial demand [9]. The school is responsible for providing educational resources, conducting professional teaching and scientific research activities, and cultivating high-quality

talents that meet the needs of society. As the demand side of talents, enterprises participate in the process of talent training, provide internship opportunities, and jointly promote the improvement of talent training quality.

School-enterprise cooperation is one of the important practical modes in the construction of local ecological circle. Through school-enterprise cooperation, schools and enterprises can jointly formulate talent training programs, jointly develop courses, and jointly carry out practical teaching. The integration of production and teaching is to combine industry and teaching closely, so that students can get in touch with the actual working environment and tasks during the learning process, so as to better adapt to the future career development.

4. High quality training strategies for food and drug testing talents in vocational schools

(1) Optimize professional course offerings and align with industry demands

In view of the problem that the curriculum of food and drug testing specialty in vocational schools is out of line with the market demand, the curriculum should be optimized to meet the needs of the industry. Specific practices are shown in Table 2.

Table 2 Curriculum optimization scheme of food and drug testing specialty in vocational schools

Optimization steps	Specific content	Implementation method
1	In-depth research on industry demand	Through questionnaires, interviews, field visits, etc., to understand the demand for testing talents in the food and drug industry.
		Establish contact with industry associations and human resources departments of enterprises to obtain the latest trends of industry development and information on talent demand.
		Analyze the survey data, and clarify the industry's core skills requirements for food and drug testing talents.
2	Adjust the curriculum according to the survey results	Compare the existing curriculum with the industry skill requirements, and find out the gaps and deficiencies.
		Delete or compress the outdated course content with low relevance to industry needs.
		Add new courses or modules closely related to the needs of the industry, such as modern testing technology and food and drug safety regulations.
3	Invite enterprise experts to participate in curriculum design and teaching regularly	Establish long-term cooperative relations with a number of food and drug enterprises, and invite their technical backbones or management personnel to serve as visiting professors or training instructors.
		Organize a seminar on curriculum design, invite enterprise experts to participate together, and ensure that the curriculum content is closely integrated with the needs of the industry.
		Hold lectures and training courses on school-enterprise cooperation regularly, so that enterprise experts can directly participate in teaching and provide practical cases and experience sharing.

(2) Strengthening the construction of teaching staff and improving teaching quality

Teaching staff is the key to improve teaching quality. Vocational schools should introduce industry experts with rich practical experience as part-time teachers; Organize teacher training regularly to improve teachers' professional skills and teaching level; Encourage teachers to participate in industry exchanges and academic research, and broaden their horizons and knowledge. In order to further improve teachers' professional quality and teaching ability.

(3) Improve the internship and training system to enhance practical abilities

Practice training is an important link to improve students' practical ability. Vocational schools

should improve the practice training system and provide more practical opportunities for students, as shown in Table 3.

Table 3 Measures to improve the practice training system in vocational schools

Category of measures	Specific content	Implementation details
Cooperate to establish practice teaching base	Cooperate with enterprises to establish a stable practice teaching base	Choose influential enterprises in the industry as partners.
		Sign a cooperation agreement to clarify the rights and obligations of both parties.
		Invest resources together to build a practice base that meets the teaching needs.
Make an internship training plan	Formulate a perfect internship training plan and management system	According to the professional characteristics and industry demand, make a detailed internship training plan.
		Set up a special internship management department to be responsible for the implementation and supervision of the plan.
		Regularly evaluate and adjust the internship training plan to ensure that it matches the actual needs.
Strengthen guidance and supervision	Strengthen the guidance and supervision in the process of practical training	Equipped with experienced instructors, responsible for the guidance and help of students during the internship.
		Establish a regular reporting and feedback mechanism to keep abreast of students' internship and training.
		Strict assessment of students' internship training results to ensure that students truly master practical skills.

(4) Promote the deep integration of industry, academia, research and application, and cultivate innovative talents

The deep integration of industry, academia, research and application is an effective way to cultivate innovative talents. Vocational schools should encourage students to participate in scientific research projects and innovation and entrepreneurship activities; Strengthen research and development cooperation with enterprises, jointly promote technological innovation and achievement transformation; Establish an innovation and entrepreneurship education system to cultivate students' innovation awareness and entrepreneurial ability. To provide students with more opportunities for innovation.

5. Conclusions

Based on the in-depth analysis of the current situation of food and drug testing talents training in vocational schools, this article finds that there are some problems such as the disconnection between curriculum and market demand, weak practical teaching links and insufficient teachers. On this basis, the strategy of constructing local ecological circle is put forward. The main findings include: the construction of local ecological circle can significantly improve the training quality of food and drug testing talents in vocational schools, promote the integration of production and education, and promote school-enterprise cooperation, so that students can better adapt to market demand and improve their employment competitiveness.

Based on the above findings, this article puts forward the following policy suggestions: the government should increase its support for food and drug testing specialty in vocational schools, formulate relevant preferential policies, and encourage enterprises to participate in talent training; Vocational schools should strengthen cooperation with enterprises, jointly formulate talent training

programs, optimize curriculum and strengthen practical teaching; Enterprises should actively participate in the process of talent training, provide internship opportunities and jointly promote the improvement of talent training quality. These suggestions have important practical significance for promoting the high-quality training of food and drug testing talents in vocational schools.

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