ISSN: 2710-0170

Research on the Implementation Path of the "Integration of Specialized Education and Innovation and Entrepreneurship Education" Teaching Reform for Food-related Professional Courses

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Abstract

This study aims to deeply explore the implementation path of the "integration of specialized education and innovation and entrepreneurship education" teaching reform for food-related professional courses. Firstly, it analyzes the current problems faced by food-related majors in the aspect of "integration of specialized education and innovation and entrepreneurship education", including the lack of systematic integration in the curriculum system, the weakness of practical teaching links, the difficulty for the teaching staff to meet the requirements, and the imperfect evaluation mechanism. Secondly, it elaborates in detail the implementation path of the reform, covering aspects such as curriculum system optimization, practical teaching reinforcement, improvement of the teaching staff's level, and improvement of the evaluation mechanism. Finally, it emphasizes the guarantee measures in the implementation process, such as policy support, organizational guarantee, and resource guarantee. Through these reform measures, it is expected to improve the innovation and entrepreneurship ability of students majoring in food-related fields, cultivate high-quality innovative talents who meet the development needs of the food industry, and promote the development and innovation of food-related professional education.

Keywords

Food-related Majors; Specialized Education; Innovation and Entrepreneurship Education

1. Introduction

The food industry, as a crucial industry that concerns people's livelihood, is currently undergoing rapid development and transformation. With consumers' growing demands for food quality, safety, and diversity, as well as the extensive application of technology in the food sector, the food industry has an increasingly urgent need for innovative talents [1]. The teaching reform of integrating specialty and innovation in food-related major courses will become a key measure for cultivating talents who can meet the needs of the food industry in the new era. This is not only conducive to enhancing students' innovation and entrepreneurship capabilities, making them more competitive in their future career development, but also injecting new vitality into the food industry and promoting its continuous innovation and development.

ISSN: 2710-0170

2. Analysis of the Current Situation and Problems of the Integration of Professional Education and Innovation and Entrepreneurship Education for Students Majoring in Food

2.1. In terms of the curriculum system

The curriculum setting is fragmented. At present, there is a lack of organic integration between food-related professional courses and innovation and entrepreneurship courses, and most of them are taught independently. Innovation and entrepreneurship courses are often offered as independent modules, and they fail to effectively connect with the teaching content and progress of professional courses. As a result, it is difficult for students to integrate innovation and entrepreneurship knowledge with professional knowledge [2]. For example, in the Food Processing Technology course, students mainly learn the technical processes of food processing, while the contents such as market research and business model innovation in the innovation and entrepreneurship courses are not closely integrated with it. Students are unable to apply food processing technology to actual innovation and entrepreneurship projects.

2.2. Practical Teaching Links

There is a shortage in the construction of practical platforms. The practical teaching facilities and venues on campus are limited, making it difficult to meet the needs of students for carrying out innovation and entrepreneurship practical activities. The practical teaching of food-related majors usually relies on laboratory equipment, but the variety and quantity of laboratory equipment may not be sufficient to cover the diverse innovation and entrepreneurship ideas of students [3]. At the same time, the cooperation between off-campus practical bases and the school is not deep enough. The practical projects provided by enterprises for students often deviate from the actual innovation and entrepreneurship scenarios, and students find it difficult to obtain comprehensive training in innovation and entrepreneurship capabilities during the practical process.

2.3. Construction of the Teaching Staff

There is a lack of ability in innovation and entrepreneurship education. Most teachers lack practical experience in innovation and entrepreneurship, making it difficult for them to vividly impart knowledge and skills related to innovation and entrepreneurship during the teaching process. Teachers themselves have insufficient innovative thinking and entrepreneurial awareness, and are unable to effectively guide students to conduct innovative thinking and entrepreneurial practice [4]. For example, when teaching the course of Food Marketing, teachers may only explain marketing principles from a theoretical perspective, without being able to share, in combination with actual cases, how to innovate the marketing model and explore new markets in the food market.

2.4. Evaluation mechanism

The evaluation method is single. It mainly takes the examination results as the basis for evaluating students' learning achievements, ignoring the evaluation of students' performance in the process of innovation and entrepreneurship practice, team cooperation ability, the development of innovative thinking and other aspects [5]. This single evaluation method cannot comprehensively and accurately reflect students' comprehensive qualities and innovation and entrepreneurship abilities. It is likely to cause students to only focus on the study of theoretical knowledge while neglecting the cultivation of practical and innovative abilities.

ISSN: 2710-0170

3. Implementation Path of the Teaching Reform of "Integration of Specialization and Innovation and Entrepreneurship" in Food-related Professional Courses

3.1. Optimize the Curriculum System

Construct an integrated curriculum system. Break the boundaries of traditional courses and deeply integrate the concepts and contents of innovation and entrepreneurship education into the curriculum system of food-related majors. From the curriculum objectives, teaching syllabi to teaching contents, fully reflect the requirements of "integration of specialization and innovation and entrepreneurship" [6]. For example, in the course of Food Raw Materials Science, in addition to explaining the basic properties and uses of food raw materials, introduce cases of innovative utilization of raw materials to guide students to think about how to develop new food raw materials or improve the utilization methods of existing raw materials, and cultivate students' innovative thinking.

Develop characteristic innovation and entrepreneurship courses. Combining with the hot topics in the food industry and market demands, develop innovation and entrepreneurship courses with the characteristics of food majors [7]. For example, in the course of Case Analysis of Food Innovation and Entrepreneurship, by analyzing successful domestic and foreign cases of food innovation and entrepreneurship, students can learn about innovative business models, product research and development strategies, and marketing techniques; in the course of Food Entrepreneurship Project Planning and Management, guide students to complete the whole process from the conception of an entrepreneurship project, market research, writing of a business plan to project implementation and management, so as to improve students' practical entrepreneurship ability.

3.1. Strengthen practical teaching

Strengthen the construction of practical teaching platforms. Increase investment in the school's food innovation and entrepreneurship practice base, purchase advanced food processing, testing, and research and development equipment, and simulate a real food production and innovation and entrepreneurship environment. At the same time, establish close industry-university-research cooperation relationships with food enterprises, jointly build off-campus practice bases, and provide students with opportunities to participate in actual innovation and entrepreneurship projects of enterprises, enabling students to accumulate experience in practice and improve their ability to solve practical problems [8].

Enrich the forms of practical teaching. Carry out diverse practical teaching activities, such as food innovation and entrepreneurship competitions, enterprise simulation operation training, food innovative product research and development practice, etc. Encourage students to participate in teachers' scientific research projects and cultivate their innovative abilities in scientific research practice [9]. For example, organize students to participate in food innovative product research and development practice projects. Under the guidance of teachers, students start from market demand research, conduct product concept design, formula research and development, process optimization, and finally develop innovative food products and plan for market promotion, comprehensively improving students' comprehensive qualities in innovation and entrepreneurship.

3.2. Improve the quality of the teaching staff

Strengthen teacher training and further education. Regularly organize teachers to participate in special training courses on innovation and entrepreneurship education, academic seminars, and practical training in enterprises, so as to enhance teachers' concepts and practical abilities in innovation and entrepreneurship education. Encourage teachers to take temporary posts in

ISSN: 2710-0170

food enterprises, participate in the research and development and management work of enterprises, keep abreast of the latest industry trends and the actual needs of enterprises, and integrate practical experience into teaching [10]. For example, select teachers to participate in new product research and development projects in food technology innovation enterprises, learn about the enterprise's innovative management mode and technology research and development process, and teach the knowledge they have learned to students after returning to school.

Introduce and cultivate innovation and entrepreneurship mentors. Invite entrepreneurs, senior executives, and technical experts with rich experience in innovation and entrepreneurship in the food industry to serve as part-time mentors, forming a complementary relationship with in-school teachers. Establish a database of innovation and entrepreneurship mentors to provide students with personalized guidance and consulting services [4]. At the same time, encourage in-school teachers to carry out teaching research on innovation and entrepreneurship education, explore "integration of specialty and innovation" teaching methods and models suitable for the food major, and cultivate a group of backbone teachers with the ability of innovation and entrepreneurship education.

3.3. Improve the evaluation mechanism

Establish a diversified evaluation system. Adopt diversified evaluation methods to comprehensively evaluate students' learning achievements and innovation and entrepreneurship capabilities. In addition to examination scores, students' performances in classroom discussions, project practices, and innovation and entrepreneurship competitions should be included in the evaluation scope, and emphasize the process evaluation [7]. For example, in the course of Food Technology, in addition to the final examination, a comprehensive evaluation is also conducted based on students' proposed process improvement plans in class, the innovative practice achievements in group projects, and their performances in food technology innovation competitions.

Improve the evaluation index system. Construct a scientific and reasonable evaluation index system for innovation and entrepreneurship capabilities, and clarify the evaluation content and standards. The evaluation indicators should include innovative thinking ability (such as the quantity, innovativeness, and feasibility of innovative ideas), entrepreneurial practice ability (such as project planning and implementation ability, market development ability, and team collaboration ability), professional knowledge application ability (such as the degree of applying food professional knowledge to innovation and entrepreneurship projects), etc. [8]. By quantifying and refining the evaluation indicators, it is ensured that the evaluation results are objective and accurate, providing students with targeted feedback and guidance, and promoting the continuous improvement of students' innovation and entrepreneurship capabilities.

4. Conclusion

The teaching reform of integrating specialization and innovation in food-related professional courses is an inevitable choice to meet the development needs of the food industry and cultivate innovative talents. Through in-depth analysis of existing teaching problems, implementing reform paths such as optimizing the curriculum system, strengthening practical teaching, improving the teaching staff's level, and perfecting the evaluation mechanism, and providing policy, organizational, and resource guarantees, it is possible to effectively enhance the innovation and entrepreneurship capabilities of students majoring in food. This will cultivate more high-quality talents with innovative spirit, practical ability, and entrepreneurial awareness for the food industry, promote the innovative development of food-related professional education, and facilitate the transformation, upgrading, and sustainable

ISSN: 2710-0170

development of the food industry. During the implementation of the reform, experience should be continuously summarized, and reform measures should be adjusted according to the actual situation to ensure that the teaching reform achieves practical results and injects new vitality into the development of the food industry.

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