

Reconstructing Food Professional English Course Teaching to Meet Future Food Industry Needs: A Practice-Oriented Exploration from the Perspectives of Globalization and AI Empowerment

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Abstract: With the development of globalization, international communication in the food industry has become increasingly frequent. Mastering English skills related to the food profession can help students communicate effectively with international peers, enhance their adaptability in international enterprises, and boost their employment competitiveness, thereby expanding career development opportunities. The food professional English course is a mandatory subject set by universities to cultivate high-quality talents in the food field, enabling students to better understand the food cultures and consumption habits of different countries and regions. Furthermore, mastering relevant English skills allows students to access cutting-edge food science research techniques and the latest scientific achievements, promoting innovation in research levels. To enhance the cultivation of English skills and comprehensive qualities among food professionals, which will have a profound impact on their future learning, research, and career development, this article primarily analyzes the teaching reform pathways for food professional English courses under the new conditions of globalization and artificial intelligence. It was hoped that the viewpoints presented in this article can provide relevant guidance for the improvement and enhancement of food professional English courses.

Keywords: Globalization; Artificial intelligence; Food professional English courses; Teaching reform and practice

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1. Introduction

With the increase in global trade and communication, the food industry faces competition in the international

market, making professional English proficiency a necessary skill. Currently, the rapid development brought about by science and technology has led to swift advancements in food science and technology, which in turn requires timely updates to educational content to cultivate students' abilities to adapt to new technologies and methods. The continuous changes in food safety standards and regulations across countries require students in food-related majors to master relevant professional English knowledge in order to understand and comply with international standards. Consumers' growing demands for food quality, safety, and nutritional value urge food professionals to possess cross-cultural communication skills to meet the diverse needs of the food market. Therefore, in the context of higher education reform, which emphasizes quality education and practical skills training, food professional English courses should keep pace with the times and incorporate more practical applications^[1]. In this social context, food professional English courses need more targeted and effective reform measures to better meet students' learning needs and the requirements of industry development^[2].

2. The teaching content of food professional English course

The food professional English course is a compulsory program that integrates food science knowledge with the English language^[3]. Its aim is to enable food science students to master relevant professional terminology and phrases, and to effectively apply English for both written and oral communication within the food industry. Moreover, the course requires students to proficiently read and translate English literature related to food science, facilitating independent learning of professional knowledge pertaining to the development of the food industry, thereby fostering a broader international perspective and professional competence. In addition to scientific paper writing, the course covers a diverse range of topics, including food chemistry, food nutrition, food microbiology and fermentation, food additives and enzymes, food processing and storage, food quality and safety, as well as new technologies in food production.

The section on scientific paper writing provides a detailed discussion on the characteristics of scientific papers, translation techniques, writing methods, and the reading and comprehension of scientific literature in food English. The course emphasizes relevant vocabulary and phrases, familiarizing students with common expressions used in food professional English^[4].

3. Problem existing in the teaching of food professional English course under current development situation

3.1. The course content is not updated regularly

Due to the rapid advancements in food science and technology, the curriculum for English courses in food studies has not kept pace with the latest research findings and industry developments, resulting in students acquiring knowledge that is not sufficiently cutting-edge. The field of food science and technology experiences swift updates in research outcomes, including novel food processing techniques, food safety standards, and nutritional studies. If the course content is not updated in a timely manner, students will be unable to access the latest scientific discoveries and technological applications. As market demands evolve, the food industry faces new challenges and opportunities. For example, there is an increasing consumer focus on health foods, and biotechnology and sustainability have become prominent industry topics. If the curriculum does not reflect these changes, students' knowledge may become outdated and fail to meet the actual needs of the industry.

The English course in food studies must not only teach professional terminology but also encompass content related to the latest research findings and industry dynamics. Without timely updates, students

may encounter difficulties in understanding and applying the latest research outcomes in practical settings. With the acceleration of globalization, international communication within the food industry has become increasingly frequent. Students need to be equipped with the latest information and research findings to effectively communicate with their international peers in a multicultural environment. A lagging curriculum will hinder students' ability to adapt to an internationalized work context. The rapid development of food science necessitates that students possess innovative thinking and problem-solving skills. If the course content does not include cutting-edge research and technologies, it may restrict students' capacity for innovation and adversely affect their performance in future careers. Therefore, the timely updating and adjustment of the curriculum is crucial to ensure that students acquire contemporary professional knowledge and skills.

3.2. Problem of insufficient teaching resources and mismatched professional backgrounds of teachers

The issue of insufficient teaching resources is particularly prominent in the context of English instruction for food science ^[5]. This phenomenon directly impacts the professional backgrounds of teachers and the quality of instruction. Many English teachers specializing in food science may lack a solid background in food science, which hinders their ability to provide in-depth explanations of relevant professional knowledge during their courses.

This deficiency in knowledge prevents teachers from effectively integrating the latest research findings and industry developments in food science into their teaching, thereby affecting students' understanding and mastery of the subject matter. The professional background of teacher directly influences their teaching methods. Teachers without a background in food science may be unable to employ appropriate instructional strategies suited to this field, such as case-based learning or experimental teaching. As a result, their teaching methods may become monotonous, making it difficult to stimulate students' interest and engagement. Teachers often employ traditional teaching methods, such as lectures and rote memorization, which dominate the classroom ^[6]. This approach lacks interaction and practical application, resulting in low student interest and participation. This limitation in teaching approaches further diminishes students' participation and learning outcomes. The food industry is rapidly evolving, with new technologies, standards, and consumer demands constantly emerging. Teachers lacking a background in food science may have insufficient sensitivity to these industry dynamics, making it challenging for them to incorporate these changes into their course content in a timely manner. Consequently, students may miss out on exposure to the latest industry information during their learning process, leading to a knowledge base that becomes outdated and ill-equipped to adapt to the fast-changing market environment.

3.3. Insufficient integration of food professional English course with other disciplines

The differences in students' English proficiency levels are significant, making it challenging for the course to meet the diverse needs of learners. The curriculum lacks authentic industry cases and internship opportunities, which hinders the ability of students to apply their knowledge in real-world contexts, thereby impacting their professional competency development. Additionally, the integration of the English course for food science with other disciplines, such as food science and nutrition, is often insufficient, preventing students from fully grasping the complexities of the food profession. The field of food science encompasses various domains, including food science, nutrition, food safety, and food processing. The knowledge across these different disciplines is interwoven, requiring students to possess interdisciplinary understanding in order to fully grasp the complexities of the food profession. If the English curriculum does not effectively integrate with these subjects,

students will struggle to connect their English learning with professional knowledge, resulting in an insufficient overall understanding of the food profession.

The assessment methods primarily rely on written examinations, lacking a comprehensive evaluation of students' practical application skills and overall competencies, which fails to accurately reflect their learning outcomes. To address these issues, effective reform measures are necessary to enhance the quality and effectiveness of the English curriculum for food majors.

3.4. The diverse demands under globalization and artificial intelligence on food professional English courses

The process of globalization has rendered the markets and consumer demands within the food industry increasingly diverse. Students in food-related programs must acquire professional knowledge and language skills that are contextualized within various cultural frameworks to adapt to the evolving international market. However, existing English courses for food professionals often lack an in-depth exploration of different cultures and market demands, resulting in students being ill-equipped to effectively address the challenges posed by globalization in practical applications. Simultaneously, the rapid advancement of artificial intelligence technologies is profoundly transforming the food industry through innovations such as automated production, intelligent supply chains, and data analytics. Consequently, food professional English courses need to be updated to include relevant knowledge and applications pertaining to these emerging technologies. Nonetheless, current curricula frequently fail to keep pace with technological developments, leaving students without the essential skills and knowledge required for future employment.

In the context of globalization and artificial intelligence, interdisciplinary integration becomes particularly crucial. However, many English courses are inadequately integrated with other disciplines, hindering students' ability to comprehensively understand the complexities and diversities of the food profession. In summary, English courses for food professionals face numerous issues and challenges under the influences of globalization and artificial intelligence. To enhance the quality and effectiveness of these courses, significant reforms are necessary, focusing on interdisciplinary integration, curriculum updates, diversified assessment methods, and strengthened professional training for educators. This approach is essential for cultivating high-quality talent that meets the demands of the future market.

4. Educational innovation and professional development in food professional English course

4.1. Adjustments in teaching philosophy

In the context of globalization and artificial intelligence, higher education instructors face numerous challenges and opportunities ^[7-9]. The application of artificial intelligence technology in language learning, especially English teaching, is subverting the traditional learning mode ^[10]. To adapt to the new educational environment and meet student needs, educators must adjust their teaching philosophies and methodologies. Instructors should transition from being mere transmitters of knowledge to becoming facilitators and supporters of learning. The research found that artificial intelligence enhances learning experiences of students and affects the work engagement of higher education teachers ^[11]. A student-centered approach is essential, focusing on individual differences, interests, and needs while emphasizing active participation and personalized learning. This approach aims to stimulate students' motivation to learn English for the food profession and encourages the development of autonomous learning capabilities and critical thinking skills. Moreover, it is crucial to integrate

food professional knowledge with English language learning, assisting students in understanding professional terminology and industry contexts, thereby enhancing their practical application skills.

Globalization has introduced cultural diversity, necessitating the cultivation of students' cross-cultural communication abilities. Educators should incorporate the cultural contexts of the international food industry into the curriculum, helping students comprehend and respect diverse cultural backgrounds while broadening their global perspectives. Education should be viewed not as a finite phase but as a continuous process. Instructors should encourage students to develop a lifelong learning mindset, enabling them to adapt to the rapidly evolving food industry and its associated technologies.

4.2. Reform of teaching methods

The reform of teaching methods should integrate both online and offline instruction, combining online learning platforms with traditional classroom teaching. By utilizing multimedia resources and interactive tools, a flexible learning approach can be provided to meet the diverse learning needs of students, thereby enhancing the flexibility and convenience of the learning experience. Through a variety of teaching methods, students' key competencies can be cultivated. The use of real-world projects and case analyses is essential for improving students' practical skills and problem-solving abilities, thereby facilitating the integration of theory and practice.

Students should be encouraged to conduct research and engage in discussions related to practical cases concerning food safety and nutritional analysis, which will enhance their practical skills and language application abilities. Increasing classroom interaction through methods such as group discussions and role-playing will encourage active participation among students, thereby improving their oral expression skills and fostering teamwork. An open, inclusive, and innovative learning environment should be created to encourage students to express themselves freely and explore new ideas, ultimately cultivating high-quality talents who can adapt to the demands of future society.

4.3. Emphasizing both ethics and skills development path for teachers

In the context of economic globalization and the rise of artificial intelligence, it is essential to establish a development path for teachers that prioritizes ethical standards as the foremost criterion, integrating moral education with professional enhancement. This approach should address both moral qualities and professional skills, taking into account various factors such as teaching methods, curriculum design, teacher training, and international exchanges. This ensures that teachers can cultivate talents who possess not only professional skills but also a strong sense of social responsibility in a rapidly changing educational environment. Through continuous efforts and innovations, teachers will be better equipped to meet future educational demands, laying a solid foundation for the comprehensive development of students. Food professional English teachers must continually update their knowledge in food science, technology, and related fields to ensure they can teach the latest professional content. Additionally, enhancing their English proficiency, particularly in relevant technical terminology, will enable teachers to maintain the quality of their instruction and facilitate mutual exchanges with the international food industry. Furthermore, there should be an ongoing commitment to innovation in teaching methods and technologies.

By utilizing a variety of online teaching platforms and artificial intelligence-assisted tools, teachers can expand their educational resources and improve teaching effectiveness. Courses that integrate food science with English language instruction should be developed to meet market demands and foster students' comprehensive abilities. This shift from the traditional "learning for application" to "application for learning" encourages

students' motivation by stimulating their engagement in language use to accomplish job-related tasks. This transition promotes a change from knowledge acquisition to skill enhancement, thereby comprehensively improving the research, innovative capabilities, and information literacy of food professional English teachers. Higher education institutions should allocate teaching resources effectively, providing necessary technical support and financial backing to facilitate the training and development of food professional English teachers

4.4. Reform of digital practice course in food professional English course

The digital practice of education towards intelligent education is crucial for the reform of food professional English courses, enhancing students' proficiency in professional English and their practical application abilities, as well as cultivating versatile talents that can adapt to the future development of the industry. To advance the digital practice course reform in food professional English, it is essential to clearly define course objectives. These objectives should align with the characteristics of the food profession and set English proficiency goals that match industry needs, such as fostering students' mastery of technical terminology and the ability to write industry reports. In the teaching process, educators need to integrate digital tools with food professional English to enhance students' practical application skills and professional competencies. This includes developing online course platforms and language learning software that utilize digital teaching resources, providing video explanations, case analyses, and compiling or introducing electronic textbooks.

Incorporating multimedia elements such as audio, video, and animations can further enrich the students' learning experience. To improve the academic performance of students and cultivated their learning motivation and self-regulation, confidence, and higher-order thinking skills through the flipped language classroom ^[12]. Regular teacher training should be organized to improve educators' capabilities and competencies in digital teaching.

5. Conclusion

With the changes in international situations, educational policies and the iterative upgrades of artificial intelligence, there is always a market for those proficient in English and familiar with Western culture. In the face of a new wave of technological revolution driven by artificial intelligence, the empowerment of education by AI has become an inevitable trend, shaping a new paradigm for educational reform and development. The English course for food professionals, as a core course for students in food-related majors, needs to adapt to the current situation of economic globalization and the frequent exchanges and cooperation in the international food industry, aligning with the development and demands of the AI era to enhance students' learning and development in the digital age. Teachers must teach students how to think and create, rather than just focusing on knowledge transmission and acquisition.

The key is for teachers to guide students in using various AI technologies in a reasonable and scientific manner to cultivate logical and critical thinking. Therefore, in the practice of AI-empowered education, it is essential to keep abreast of the development trends of AI and deepen the application of AI in research, teaching, learning, management, and evaluation, fully leveraging the empowering effects of AI to reimagine and create a new pattern for the future development of education.

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