

Reflection on Some Issues in Marine Fisheries English Teaching under the Background of Neo-agriculture Education – With Reference to Tianjin Agricultural University

Xu Lili^{1,a}, Cui Wenting^{1,b}, Xu Hailong^{1,c,*}

¹College of Fisheries, Tianjin Agricultural University, Tianjin, 300384, China

^a xvlili1990@163.com, ^b wentingcui21@163.com, ^c beiji80@163.com

*Corresponding author

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Abstract: With the continuous advancement of economic globalisation and the rapid development of modern agriculture, international communication in agriculture has become an inevitable trend. As one of the critical courses for cultivating Marine Fisheries Science and Technology (MFST) majors in universities, Marine Fisheries English (MFE) aims to expand students' professional perspectives, master international advanced research, and enhance their international communication skills. Based on the global talent training mode of marine fisheries, it is necessary to optimise and improve all aspects of English teaching for the majors. Based on the characteristics of English teaching, this paper analysed the problems existing in the current MFE teaching processes for MFST in the university. It put forward some optimisation suggestions on the reform and exploration of MFE teaching from four aspects: teachers, teaching content, teaching mode and evaluation, to provide reference for the training of MFST majors in colleges and universities.

1. Introduction

Since the 21st century, China's marine economy has undergone significant development, with some maritime industries ranking among the top coastal countries in the world. However, compared to the scale of China's economic growth and the overall level of world marine development, there is a particular gap between China and developed countries in marine fisheries. The report of the 20th National Congress of the Communist Party of China proposes to build China into a maritime power. It is essential for making our country into a powerful marine nation, from proposing the strategic aim of "gradually establishing the powerful marine country" to "the sea-land economy coordinated sustainable development" and then to step up the construction of maritime power. It is essential that accelerate the realisation of the maritime power dream lies in improving the quality of personnel training in an all-round way and providing intellectual support for it^[1]. The modernisation of marine fisheries is an essential component of building maritime power, solving the "Three Rural Issues", and achieving agricultural modernisation^[2].

The construction of new agricultural sciences is a practical innovation of higher education in adapting to new global technologies and new formats in developing agricultural education. It is also an essential requirement for the development of modern agriculture in China in the new era to meet the demand for high-quality talent^[3]. Meanwhile, with the continuous advancement of economic globalisation and the rapid development of modern agriculture, international exchanges in the field of agriculture have become an inevitable trend. This also means that the talents cultivated by higher agricultural universities must meet such practical needs, one of which is to have the ability to apply professional English. Therefore, it is urgent to carry out the construction of Marine Fisheries English (MFE) courses and cultivate internationally competitive college students. As a professional course that connects marine professional knowledge and the English language, MFE is a meaningful way to develop high-quality composite marine fishery talents with broad international perspectives and cross-cultural communication. MFE is a professional elective course for students majoring in Marine Fisheries Science and Technology (MFST) at Tianjin Agricultural University. It

is a specialised English for professional purposes based on professional knowledge of the major. However, in the face of new situations and challenges, there are still many shortcomings in the curriculum construction of MFE. Therefore, based on the characteristics of English teaching, this thesis discussed the basic situation and problems in the teaching process of MFE and explored the curriculum construction from the aspects of teaching philosophy, teaching content, teaching mode, assessment and evaluation, providing references for cultivating composite talents in the new era of the marine fishery.

2. Current Teaching Status of Marine Fisheries English

2.1. Basic Information of Marine Fisheries English

MFE serves the training of marine fishery professionals. As a traditional agriculture-related major, MFST is a multidisciplinary and application-oriented major, which involves fishing, resources, machinery, electronics, computers, management and other disciplines^[2]. As a traditional core major of the Fisheries College of Tianjin Agricultural University, it aims to cultivate composite applied talents in marine fisheries responsible for fisheries development and controllable fisheries management.

MFE features strong professionalism, practicality and pertinence. According to the need for professional talent training, MFE should consider cultivating students' theoretical learning and practical application abilities. MFE is a professional elective course for third-year students of MFST to develop English proficiency in all aspects, such as reading, writing, listening, speaking, and translation, and finally achieve the goal of using English as a tool to obtain information about marine-related majors, track the development of science and technology and academic knowledge of the major, strengthen the ability of foreign scientific and technological exchanges, and meet the needs of international cooperation in marine science^[4].

2.2. Students Characteristics

Compared with other universities at the same level, our school cannot attract high-quality students, and the first-choice admission rate for the major is relatively low. The students mainly come from coastal provinces and cities, with more students in rural areas. Their English listening and speaking are weak links in English learning. Students have weak motivation to learn MFE. Over the past three years, the number of students choosing courses in professional English was only 50% of the total number of professionals. The primary purpose of most students was to obtain credits and understand marine-related knowledge, while the connection with future career development was relatively low. They lacked the enthusiasm and initiative to use the knowledge they had learned to serve marine activities. At the same time, the student community in the digital age has undergone significant changes, highlighting individual differences and characteristics of the digital age. Scholars define the group that grows with information technology as digital indigenous people. The digital indigenous features of college students (accompanied by technological growth, multitasking, reliance on image communication, and instant gratification and rewards) have a profound impact on teaching^[5]. Therefore, the teaching process and students' characteristics have transformed, and classroom teaching has shifted from focusing on the overall teaching situation to emphasising individual differences among learners. Students have transformed from passive recipients of education to active participants and practitioners of educational activities. Students also become creators of knowledge and, based on their existing knowledge structure, acquire new knowledge according to individual needs and engage in the fusion, creation, and updating of knowledge^[6].

3. Problems in Marine Fisheries English

3.1. Lagging Teaching Philosophy

The teaching philosophy is the foundation of innovative teaching reform models. Therefore,

teaching reform for MFE requires creation in teaching philosophy. Teachers are the implementers of curriculum reform, and whether they possess advanced teaching concepts directly affects the effectiveness of curriculum teaching^[7]. The teaching of MFE courses was mainly completed by professional course teachers, who had a solid professional foundation but also lacked theoretical support and empirical guidance for the teaching reform of professional English under the new situation. In the teaching process, there was often an emphasis on the training of reading and writing abilities while neglecting the cultivation of listening and speaking skills, which weakened students' sense of participation and experience in learning, making them more prone to fear and loss of interest in specialised courses.

3.2. Delay in Updating Teaching Syllabus and Teaching Contents

Under the background of the strategy of “Maritime Power” and the “New Agricultural Science”, MFE continues to play an important role, and there is an urgent need to cultivate high-quality marine fishery talents who are proficient in both professional and foreign languages. However, MFE lacked unified and standardised teaching materials and generally adopted self-selected scientific and technological books, journals, literature, and other content for teaching. These teaching materials usually lacked systematicness and hierarchy, and the difficulty and knowledge structure of articles was unreasonable, which was not conducive to students' professional English learning. In addition, MFE involved a wide range of professional knowledge, covering a vast number of professional vocabulary and marine-related language materials, and the sentence structures were complex with solid logic. However, the current teaching course was only 36 class hours, resulting in a prominent contradiction between limited class hours and broad teaching contents. Therefore, it is necessary to systematically improve and update the teaching syllabus and content of MFE.

3.3. One Alignment of Teaching Mode

The teaching of MFE was mainly taught by teachers and passively accepted by students, which led to low participation of students in the classroom, a rigid teaching atmosphere and low willingness of students to learn independently. MFE teaching was still mainly offline teaching, and the teaching mode had a serious exam-oriented tendency, which made it challenging to meet the needs of the new era for students' ability training, especially in the age of "Internet+", "big data" and "artificial intelligence+". Although the traditional teaching method could help students achieve ideal results in large-scale English exams in China, it was limited in improving their English proficiency^[8]. In addition, there were few professional English practice activities and limited exchange practice activities in the form of cross-cultural research through the second classroom experience and exchange with enterprises. This single teaching mode hindered students' personalised development and the improvement of professional skills.

3.4. Onefold Test Evaluation

At present, professional English usually adopted the form of examination as the assessment/evaluation method for students, adopting a “one-stop” single evaluation model led by teachers, focusing on assessing students' vocabulary, reading, translation, and writing abilities while neglecting the application and practical skills of professional English, which continued students' learning habits of college English and failed to highlight the practical and professional characteristics of professional English. This single course evaluation model was also not conducive to comprehensively and accurately grasping students' knowledge accumulation and skill learning.

4. Improvement Measures of Marine Fisheries English

4.1. Improve the Teacher Quality and Update Teaching Concepts

Although professional teachers have abundant knowledge, there may be a lack of awareness of constructing “new agricultural science”. Therefore, guidance and training should be provided to address their shortcomings. Meanwhile, teachers' teaching and research abilities should be

improved in response to the needs of “new agricultural science”. Moreover, to accurately grasp the teaching content and improve English teaching ability, professional English teachers should strengthen their interaction with experienced teachers and college English teachers and build a teaching team by guiding the new with the old. In the digital era, teachers also need to improve their digital literacy, timely understand and follow up on the digital dynamics of education, and extensively explore new teaching concepts, resources, or tools such as online learning resources, machine learning, corpus platforms, etc. to enhance their teaching skills in all aspects.

4.2. Identify Course Positioning, Optimize Course Syllabus and Contents

4.2.1. Set Teaching Objectives Based on Professional Characteristics

Under the background of the general goal of moral education, guided by the theory of ideological and political education in the curriculum, the excellent traditional Chinese culture is combined with language and majors in MFE teaching, and the curriculum is constructed from three dimensions: knowledge transmission, ability cultivation, and value shaping. The curriculum objectives align with the cultivation of students’ professional abilities. The teaching objectives of the MFE course are three levels: 1) to accumulate the essential items of marine-related majors and to master the learning methods and strategies of MFE; 2) to improve the comprehensive ability of reading, writing, translating, listening and speaking skills, cultivate the ability of independent learning and lifelong learning, and strengthen the cultivation of cross-cultural awareness; 3) to enhance students’ confidence in marine culture and cultivate high-quality professionals with a high sense of social responsibility, national sentiment, and international perspective in the field of marine fisheries, with the responsibility of building a responsible fisheries development and controllable fisheries management system.

4.2.2. Reconstruct Teaching Contents and Highlight the Characteristics of Marine Fisheries Major

MFE is a branch of English for Science and Technology, which has its unique style, characteristics and corresponding translation criteria. The design of the curriculum content should not only consider the integrity and systematicity of the marine knowledge system but also comprehensively cover an essential range in various branches of the major, focusing on improving and cultivating students’ comprehensive English abilities. To increase students’ interest and overcome their fear of learning English, the teaching content should be illustrated with rich examples and diverse exercises, reducing the difficulty of students’ learning professional English to enhance their interest. In the teaching content, marine fisheries are the foundation and include Marine Resource Biology, Fishing Gears, Forms to Fill in, and Responsible Fisheries. Other parts include The History of the Ocean, Physics on the Ocean, Marine Laws and Regulations, Maritime Transport, and Marine Economy. Marine Tourism and Marine Pollution, which are familiar to the public, are practised as extracurricular content. Using original English textbooks, academic papers, and online articles in the field of marine science, we aim to help students use professional English as a tool to access and understand the industry status, popular information, academic frontiers, and the latest trends in the field of marine fisheries abroad. The teaching content covers practical professional English content and skills such as writing skills for academic papers and writing methods for undergraduate thesis abstracts, highlighting the practicality of the teaching content.

4.3. Build a blended online and offline teaching model

Our program aims to transform the teaching mode from teacher-centred teaching to student-centred learning, utilising advanced electronic information technology as a means of operation. We will build online and offline courses suitable for MFE teaching, integrating virtual and physical teaching organically. Our modern online teaching methods will effectively achieve real-time interaction and communication between teachers and students, enabling students to have a clearer understanding of the learning content in simple and profound terms. We will guide students to engage in self-directed learning with the excellent online course resources of marine-related English.

In the class, we will emphasise situational teaching methods, experiential teaching methods, three-dimensional reproduction teaching methods, flipped classroom, heuristic, and deliberative teaching methods. This approach aims to stimulate students' enthusiasm, improve their learning ability, broaden their learning thinking, and ensure they master and understand knowledge effectively. The practical application of English is an essential means to enhance students' English proficiency in marine majors. In response to students' weak links (listening and speaking), practical activities are carried out in groups through role-playing, experiments, group debates, and other forms. Passive learning is transformed into active learning, and thorough communication and analysis are conducted on crucial and complex issues encountered during the learning process, ultimately achieving the best teaching effect. Our educational program, in the practical application stage, offers students opportunities to participate in MFE learning. Students can exercise and enhance their professional English abilities through academic exchanges, school-enterprise cooperation, professional English translation competitions, and other practical teaching activities.

4.4. Adopt a Multi-style and Process-based Based Course Evaluation Approach

Curriculum evaluation is evaluating the value and effectiveness of specific educational activities. Scientific and reasonable curriculum evaluation positively correlates with learning outcomes and can stimulate students' enthusiasm and initiative in learning. Therefore, curriculum evaluation should comprehensively evaluate students' abilities from multiple dimensions to promote their development. Based on this, when conducting course evaluation, we should improve the traditional single course assessment method of "regular grades + final exams" and insist on combining "process-based evaluation" and "outcome-based evaluation". Process-based evaluation is conducted through discussions, speeches, and rejoins, especially by adding practical abilities such as oral report presentation, sea-related topic report presentation, and experimental project results to enhance language proficiency. In addition to the teacher-led assessment method, teaching feedback such as student self-evaluation, mutual evaluation, intra-group evaluation, and inter-group evaluation should be conducted scientifically, comprehensively, and timely according to stages.

5. Conclusion

The teaching of MFE is the key to cultivating modern marine science professionals. Based on the development trends in China and abroad and the characteristics of China's marine fisheries, it is urgent to develop a professional English program that applies to the training of marine fisheries talents. In response to the problems in the teaching of MF, teachers should insist on a student-centred approach, improve their quality, update teaching concepts, identify course positioning, optimise course syllabus and teaching content, construct a mixed online and offline teaching mode, adopt multiple styles and process-based course evaluation methods, and take various measures to promote the virtuous cycle and sustainable development of MFE teaching to cultivate interdisciplinary talents in marine fisheries.

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