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# The Application of Case Teaching Method in Maritime English Education: The Practice of Improving Students' Problem-solving Ability

Feng Liu

Hainan Vocational University of Science and Technology, Haikou, Hainan 571126

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**Abstract:** As a student-centered teaching method, the case teaching method is widely used in various educational fields. This paper discusses the application of case teaching method in nautical English education and analyzes its practical effect on improving students' problem-solving ability. By introducing practical navigation cases, students can learn and apply English in real situations to improve their language skills and their ability to solve practical problems. Research shows that the case teaching method not only improves students' language skills, but also enhances their critical thinking and teamwork spirit.

**Keywords:** Case teaching method; Nautical English; Problem solving ability; Language teaching; Practical application

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## 1. Introduction

Under the background of globalization, the navigation industry improves the English ability of the practitioners. English has become an important communication tool and security guarantee in the field of navigation. Therefore, improving the ability of nautical English is the focus of education. Traditional teaching methods emphasize teaching over practice, leading to the lack of students' application ability. Case teaching method focuses on practical application and students' participation. Through the analysis and discussion of real cases, it cultivates critical thinking and problem-solving ability, which is suitable for nautical English education.

## 2. Overview of the case teaching method

Case teaching method is a method of teaching by analyzing and discussing practical cases, aiming to combine theoretical knowledge with practical application. This method emphasizes students' learning in real situations, and through the analysis and discussion of practical problems, to cultivate students' critical thinking and problem-solving ability. The core concepts of the case teaching method include real cases, student participation, and teacher guidance. Real cases must be authentic and representative, and can reflect the typical problems and situations in the actual work, which is challenging and enlightening. In the learning process, students are no longer passive knowledge recipients, but active knowledge builders, who put forward their own opinions and solutions through reading, analyzing and discussing cases. Teachers play the role of guide and facilitator in case teaching. By asking questions, guiding discussions, commenting and summarizing, they help students to understand cases deeply, and cultivate their critical thinking and problem-solving ability.

The implementation process of case pedagogy usually includes several steps of case selection and preparation, student preview, class discussion and summary reflection. Teachers choose appropriate cases according to the teaching objectives and the actual situation of students, students read and think about the cases before class, conduct group discussion and role play in class, and teachers guide the discussion and summary. Through summary and reflection, students are able to better understand the core issues of the case and apply the knowledge to practical situations. Case teaching method has significant advantages, including improving learning interest, cultivating comprehensive ability and enhancing practical application. However, there are also some challenges, such as difficult case selection, complex classroom management, and high time requirements. To meet these challenges, teachers need to have high professional quality and classroom management skills.

## 3. The current situation and challenges of navigation English education

### 3.1 The content of the textbook is disconnected from the actual needs

At present, many nautical English textbooks can not keep up with the pace of The Times, the content is old and outdated, can not accurately reflect the latest changes in modern nautical technology and operation process. This situation leads to a large gap between the knowl-

edge that students have learned and the actual needs of modern navigation work, making it difficult for them to use what they have learned in the real working environment. In addition, the textbook is full of a lot of theoretical knowledge, but the lack of practical operation guidance, which makes students feel powerless to apply the knowledge to the actual navigation operation. For example, the textbook may provide detailed explanations of nautical terms and grammar rules, but it does not provide guidance on how this knowledge can be specifically applied in practical communications and operational instructions.

### **3.2 Teaching methods are too single**

Traditional teaching methods are often based on teachers' teaching, and students only passively accept knowledge and lack of active participation. This teaching method is not only easy to reduce students' interest in learning, but also may lead to their lack of coping ability and confidence in the face of practical problems. In classroom teaching, with the lack of interactive links, students rarely have the opportunity to conduct practical operation and situational simulation, which makes it difficult for them to practice and improve their ability to apply nautical English in the real work situation.

### **3.3 Students do not have a high interest in learning**

The single teaching content and method make it difficult for students to maintain a lasting interest in learning. The lack of practical cases and situational simulation of teaching methods makes it difficult for students to stimulate their enthusiasm for learning and initiative. Due to the single nature of traditional teaching methods, it is difficult for students to see the actual effect and career development prospects of learning nautical English, which leads to their lack of motivation to learn.

### **3.4 Teacher quality and resource limitation**

Some teachers lack the practical navigation experience and the training of modern teaching methods, which directly affects their teaching effect. In terms of practical operation guidance and case teaching, the deficiencies of these teachers directly affects the learning effect of students. In addition, many schools and training institutions lack advanced teaching equipment and resources, such as navigation simulators, practical training ships, etc., which limits students' practical learning opportunities and further affects their learning effect.

## **4. Application of case teaching method in navigation English education**

### **4.1 Select the appropriate case study**

The application of case teaching method in navigation English education can effectively improve students' language application ability and problem solving ability. Choosing cases closely related to the actual work of navigation is the key to success. Ensure the authenticity and practicality of the case, so that students can learn and apply the knowledge in real situations. Suitable cases should be able to reflect typical problems and situations in practical work, challenging and enlightening. For example, cases involving communication between ships and ports, and between ships and ships can be selected to analyze how to conduct effective information transmission. These cases can include daily communication, emergency communication, etc., to help students understand and master language use in different situations.

### **4.2 Design case discussion**

Through the case of the actual navigation plan, students can learn how to make and implement the navigation plan, including the weather forecast, waterway selection, navigation log record, etc. Such cases can help students to apply theoretical knowledge to practice and improve their planning and decision-making ability. Choosing emergency handling cases about a ship in distress at sea can cultivate students' decision-making ability and response ability in emergency situations. For example, emergency communication, rescue coordination and other situations after ship distress are simulated to make students familiar with the relevant language and procedures and improve their emergency handling ability. In addition, cases involving international maritime laws and regulations can help students to understand and comply with relevant legal requirements, such as analyzing the consequences of violating international maritime laws and regulations and their handling methods, and making students realize the importance of law in navigation practice.

### **4.3 Simulated operation of the actual operation**

Through these real cases, students can better understand the application of nautical English in practical work, so as to improve the pertinacity and practicability of learning. By designing effective case discussions, teachers can help students to deeply understand the key problems and solutions in the case, and develop their critical thinking and problem-solving skills. Specific methods include group discussions and role-play. Through group discussions, students can be responsible for analyzing different aspects of the case and promoting cooperative learning; through role playing, students can simulate different crew roles and make dialogue and decision-making in the case to enhance the sense of situation and participation. In addition, teachers can put forward some key questions to guide students to think deeply, such as when discussing ship communication cases, guide students to analyze the language use, the accuracy and timeliness of information transmission in the process of communication.

## 5. Effect analysis of improving students' problem-solving ability

### 5.1 The dual improvement of language application and critical thinking ability

The case teaching method has a remarkable effect in improving students' language ability. Through case discussion and simulation operation, students' English expression ability has been significantly improved, and they can communicate more accurately and fluently, both in daily communication and in complex situations. This method not only effectively improves the students' language ability, but also cultivates their critical thinking and independent judgment ability. In the case analysis, students need to examine the problem from different perspectives and put forward unique insights. This multi-dimensional way of thinking promotes their in-depth understanding of the nature of the problem, thus improving their critical thinking ability.

### 5.2 Comprehensive enhancement of teamwork and emergency handling capabilities

Case teaching also excel in teamwork. Through group discussions and role-play, students learn how to effectively communicate, negotiate and make decisions within the team, and this improvement of teamwork ability is crucial for future study and work. In addition, the case teaching method also allows students to practice emergency treatment in a realistic environment, which significantly improves their emergency response speed and decision-making ability. This practical experience enables students to keep calm in the face of real emergencies and make correct judgments quickly to ensure the safety of navigation.

## 6. Conclusion

The application of case teaching method in navigation English education has significantly improved students' language use, critical thinking and problem-solving ability. By introducing real cases and simulated practical operations, students can communicate freely in a challenging environment. This helps students to understand the navigation term, simulate the navigation scene, use English, and lay the foundation for their future career. Case teaching method is crucial to improving the quality of education, helping students master skills, simulate the offshore operating environment and cope with real challenges. At the same time, through case analysis, students learn effective decisions and risk assessment, which is valuable for future development. Therefore, further study and promotion of case teaching have practical and strategic significance in nautical English education.

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