

Research on the Teaching Practice of Maritime English Based on Scaffolding Teaching Model

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Abstract

In the field of maritime education, Maritime English courses are widely regarded as the key to cultivating professional English application abilities. This study aims to explore the scaffolding teaching model in depth and evaluate its applicability and effectiveness in improving the teaching effectiveness of Maritime English. Through detailed analysis, this article reveals the core elements of scaffolding teaching model and examines its specific application in Maritime English teaching in detail. In addition, the article also critically discusses the challenges encountered during the implementation process and the limitations of the model. Based on these findings, the article proposes several strategies, including enhancing teaching skills and innovating teaching models, in order to optimize teaching outcomes and significantly enhance students' English language application abilities.

Keywords

Scaffolding Teaching, Maritime English, Teaching Practice.

1. Introduction

Against the backdrop of major economic and social changes, vocational education, which is most closely related to economic and social development, is facing unprecedented practical challenges. The country has begun to focus on promoting the "three education" reform of teachers, textbooks, and teaching methods in the field of vocational education. The "three education" reform has become a key lever to enhance the adaptability of vocational education to economic and social development, and achieve high-quality development of vocational education. The country advocates educational reform for the cultivation of students' various abilities, not only focusing on their practical exploration spirit, but also emphasizing the cultivation of their thinking. Nowadays, how to cultivate innovative talents that adapt to modern development is a concern of educational reform.

2. Concept of a scaffolding teaching model

2.1. Definition of "scaffold"

The term "scaffold" originates from the English word, which is translated as a supporting structure in Chinese. It is also known as "scaffolding", and is a temporary physical support structure built in the construction industry to support people and objects. It is used for buildings that are being constructed or rebuilt and no longer require safety maintenance or demolition by workers after completion.

In the 1970s, based on Vygotsky's zone of proximal development theory: Teaching can create ways to narrow the gap between learners' actual and potential development levels[1] Subsequently, scholars such as Ross, Bruner, and Wood drew inspiration from the concept of "scaffolding" in architecture and metaphorically introduced it into individual learning processes. They first proposed the concept of scaffolding teaching, where teachers provide learning support within the learner's zone of proximal development to help learners achieve

higher levels of development [2] The learning scaffold they refer to refers to the various forms of guidance and support that learners receive in the process of mastering new skills and knowledge.

2.2. Scaffolding teaching mode

Scaffolding teaching refers to providing appropriate and small clues or prompts (scaffolds) for students' learning step by step, allowing them to climb up through these scaffolds, gradually discover and solve learning problems, master the knowledge to be learned, improve problem-solving abilities, and grow into independent learning. This model emphasizes that educators should pay attention to the gap between students' current actual level and their potential development level, and provide moderate guidance and support in this area. This model is a dynamic process that always puts learners at the center. Its core is to provide timely "scaffolding" to help students complete tasks that they cannot currently complete independently. The ultimate goal is to make the scaffolding disappear, make learners independent, and improve their knowledge, abilities, and core competencies. In practical applications, scaffolding teaching has five stages, namely building scaffolding, entering the context, independent exploration, cooperative learning, and effecting assessment (see Figure 1). Therefore, at different stages of teaching, different span teaching scaffolds should be built based on personalized differences among students to improve teaching effectiveness, create efficient classrooms, significantly improve students' academic level, and promote the overall level of knowledge, ability, and literacy of students.

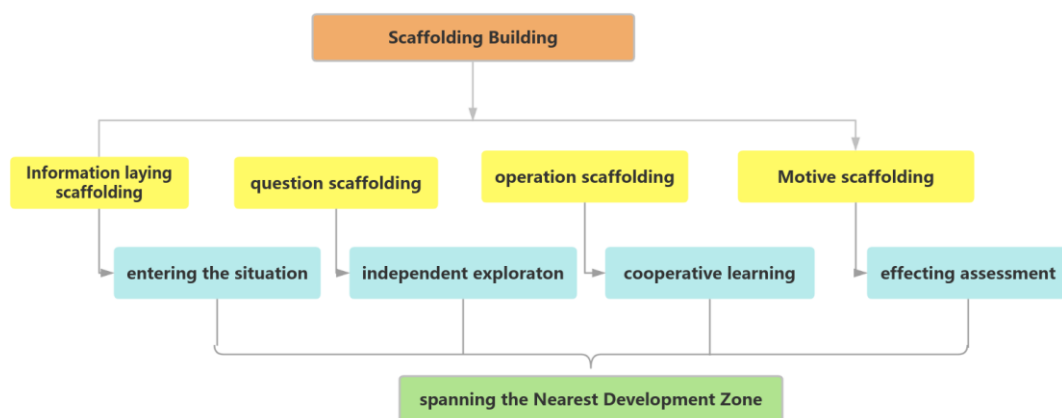


Figure 1: Framework diagram of scaffolding teaching mode

3. Principles for Building a Scaffolding Teaching Model

"Scaffolding teaching" is a teaching method based on constructivist learning theory, student-centered, and aimed at cultivating students' practical abilities in self-directed learning and problem-solving. [3] So, how to build an effective scaffolding teaching mode? Here are several basic principles:

(1) To clarify teaching objectives and the actual level of learners. Teachers need to have a clear understanding of what stage of abilities students are currently in and what learning goals they need to achieve. Only by clarifying these two points can we effectively design and adjust scaffolding teaching activities, so that they can not only meet the current needs of students, but also drive them towards their goals.

(2) Design suitable scaffolding. The design of the scaffolding should be customized according to the actual situation of the students, and cannot be generalized. For students with poor foundations, more specific guidance and support may be needed; For students with good foundations, more challenges and opportunities for independent exploration can be provided.

Moreover, when designing scaffolds, consideration should also be given to the types of scaffolds, such as conceptual scaffolds, strategic scaffolds, emotional scaffolds, etc., to meet the needs of students in different aspects.

(3) Pay attention to the timeliness of the scaffolding. Scaffolds should be provided when students encounter difficulties or are unable to complete tasks independently, and removed promptly when students are able to complete tasks independently. Too early or too many scaffolds may hinder students' learning and development, while too late or too few scaffolds may cause students to lose confidence in confusion.

(4) Continuous evaluation and reflection are necessary. Teachers need to constantly observe and evaluate the learning situation of students, understand their learning progress, and whether adjustments to the scaffolding are necessary. At the same time, one should also reflect on their teaching practices and see if there are more effective methods to help students learn.

4. The Application Practice of Creating a Scaffolding Teaching Model for Maritime English Course

The construction form of scaffolding teaching mode is diverse, including examples, questions, suggestions, guides, charts, etc. Maritime English teachers actively explore and fully utilize teaching wisdom to construct diverse frameworks and integrate them into the project-based curriculum practice of maritime English. Taking the construction of a complete framework for a maritime English course as an example (as shown in Figure 2), this article elaborates on the process of implementing a framework based teaching model in maritime English teaching.

4.1. Pre class preparation stage

In order to ensure the smooth progress of teaching activities and achieve effective learning, sufficient pre class preparation is crucial. This involves familiarity with the teaching content, the development of a detailed teaching plan, and the preparation of suitable teaching resources and materials to lay down the scaffolding. Teachers need to have a deep understanding of the professional terminology and practical context of maritime English, design interactive and informative teaching activities, and build a supportive learning environment for students. At the same time, teachers also need to ensure that technical equipment such as audio and video playback devices, multimedia projectors, etc. are in good condition to efficiently assist the teaching process. Through careful preparation before these classes, classroom efficiency can be significantly improved, ensuring that students can master the key skills of maritime English in a professional and rigorous learning atmosphere. For example, when teaching the course content of "Ship Structure and Equipment", teachers can collect ship structure knowledge materials from English speaking countries and make them into short videos for students to watch and learn. This not only warms up professional knowledge, but also promotes students' understanding of standard English expressions and accurate pronunciation. Secondly, in the pre class stage, teachers need to start effectively organizing activities and actively guide student participation to ensure efficient completion of preparatory work. Designing interactive teaching activities is the key to improving student classroom initiative and participation. With the help of online teaching platforms, teachers can upload course related content and set up different communication areas, such as the knowledge point discussion area, knowledge point self-test area, and knowledge point game area. The discussion area allows students to explore the use of English grammar or oral practice skills, and share their learning experiences with each other. The self-test area allows students to evaluate their mastery of English knowledge through self testing. The game area provides games related to learning content, such as phrase matching and brainstorming activities. Such comprehensive preparation will undoubtedly greatly improve the effectiveness of classroom teaching.

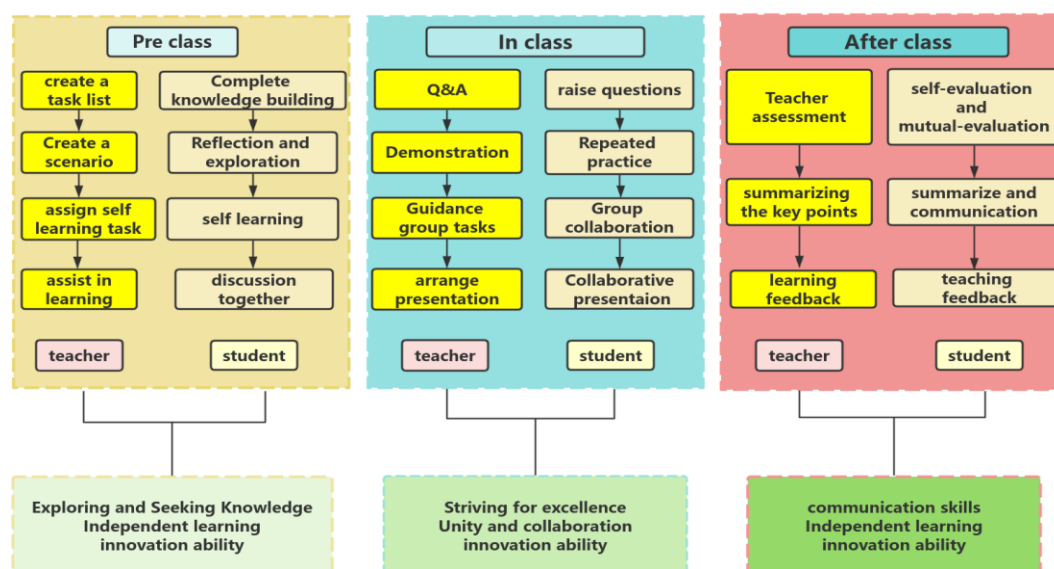


Figure 2: an example of a complete framework for a maritime English course

4.2. Classroom interaction stage

In the process of classroom teaching, teachers should fully utilize the scaffolding teaching model to construct an interactive classroom, leverage the advantages of scaffolding teaching, regard students as the center of the classroom, and comprehensively improve their actual performance in the classroom.

For vocational college students with weaker English foundations, they often feel lacking in confidence when expressing their opinions, which leads to their passivity in the classroom and limited interaction with teachers. To address this issue, teachers can guide students to engage in independent exploration by setting "scaffolds" for questions or tasks, thereby reducing their doubts and encouraging them to actively participate in classroom activities. For example, taking the lesson "Responsibilities and Obligations of Crew Members" as an example, the teacher can design the following English interactive tasks: ①Organize group discussions, allowing students to review and discuss the classification of deck crew members in groups; ②Share the crew members they know and their main job responsibilities on board the ship; ③Provide exemplary sentence structures for students to independently set up situational dialogues related to the topic and engage in targeted Q&A exercises to improve fluency. Through such classroom interaction, students can gradually enhance their problem-solving abilities while searching for answers, guide them to "climb onto the scaffolding" [4], and build a new "scaffolding" scenario on the existing foundation, find and summarize suitable English learning methods, and further expand and improve their English learning abilities. Furthermore, it enhances one's confidence and ultimately promotes the improvement of teaching effectiveness. This interactive learning method not only helps students master the course content, but also cultivates their critical thinking ability and self-learning ability.

In the classroom stage, teachers can focus on actively integrating Internet and multimedia resources to simulate the real workplace environment, so as to improve students' ability to master and practice English knowledge. By building a learning platform that is close to the real world, teachers encourage students to actively participate in knowledge practice and exchange activities, aiming to improve their learning effectiveness. Specifically, for example, teachers can organize a question and answer challenge centered on a specific topic, dividing students into two opposing teams. In this activity, students are required to ask each other questions and answer them correctly. The team that answers correctly the more times will be announced as the winner. This process not only promotes interaction between students, but also reduces

direct involvement of teachers, enabling students to become familiar with operational procedures through mutual cooperation and learn English expression in practical situations, thereby enhancing self-confidence and consolidating learning outcomes.

4.3. Post class evaluation stage

The evaluation and reflection session after class is an important component of the entire framework. Teachers need to conduct in-depth analysis of student interaction performance, language use, and knowledge mastery to ensure that teaching strategies match student needs, and adjust future teaching plans accordingly. Through this approach, teachers can ensure that teaching activities are not just one-time knowledge transfer, but a continuous process of enhancing learning outcomes. By utilizing online teaching platforms, constructing an evaluation system that includes teacher-student mutual evaluation can help accurately identify the strengths and weaknesses of classroom teaching. Through this approach, teachers can adjust their teaching strategies based on the evaluation results, thereby comprehensively improving teaching effectiveness and promoting the improvement of student learning efficiency.

In the reflection section of the curriculum, teachers should conduct in-depth thinking from the following three core dimensions:

1. Analysis of teaching results: Using simple knowledge point tests to understand students' mastery level, and based on this, analyze the shortcomings in teaching and propose corresponding optimization strategies.
2. Student status observation: Carefully monitor students' performance before, during, and after class to evaluate the impact of teaching methods on student attitudes. For example, if students shift from rejecting English to actively participating, it indicates that teaching strategies have had a positive effect.
3. Classroom effect analysis: By observing the participation and performance of students in classroom activities, the overall quality of learning is evaluated, and teaching plans are adjusted based on the observed deficiencies to ensure the suitability and effectiveness of teaching methods.

5. The problems faced by the scaffolding teaching model in the practice of maritime English courses

5.1. The weak foundation of building objects affects the construction progress

As a specialized English language, the effectiveness of learning maritime English is reflected in the ability of students to fluently use the language in their work. Through analysis of the learning situation, it is not difficult to observe that students majoring in navigation technology have a basic level of vocational English. However, due to their failure to cultivate good speaking habits, they are often unwilling to actively participate in discussions in the classroom and show a clear avoidance attitude towards teacher questioning. This lack of student initiative not only hinders the cultivation of their language practice ability, but also significantly reduces the quality of teaching interaction, thereby weakening the improvement of learning effectiveness pointed out by the scaffolding teaching model. During the process of scaffold construction, teachers need to invest extra effort to stimulate student participation, resulting in a significant amount of time spent in the initial guidance process, which inevitably takes up time for in-depth teaching of knowledge points and thus affects the overall efficiency of teaching. In addition, due to some students being more accustomed to traditional teaching methods, they lack adaptability in the new mode and find it difficult to keep up with the predetermined teaching progress, resulting in the potential advantages of scaffolding teaching mode not being fully utilized.

5.2. Lack of construction skills hinders the construction of scaffolding

The smooth implementation of the scaffolding mode requires a high level of skill and ability in the construction of teachers. Teachers should be able to flexibly utilize various teaching methods based on the characteristics of the scaffolding system and classroom teaching content to improve student learning efficiency. However, in the actual teaching process, many teachers do not update their skills related to the Internet and multimedia technology enough to enrich their teaching level with the help of the network, resulting in a single classroom construction, which affects the teaching quality and effect. Newly hired teachers are usually proficient in emerging technologies, but often find it difficult to effectively integrate these technologies into teaching practice due to a lack of necessary teaching experience. This disconnect between technology and practice prevents the teaching process from achieving the expected results, thereby constraining the overall effectiveness of classroom teaching.

5.3. Single construction mode and lack of innovative awareness

With the continuous development of information modernization and digital technology, the application of network and multimedia technology in current classroom teaching is becoming increasingly frequent. Some teachers can appreciate the advantages of scaffolding teaching mode and are willing to integrate it into the classroom. But in implementation, they lack flexibility, adopt the same technical methods for a long time, and lack innovative technological application measures. This leads to students being prone to fatigue, which in turn affects the effectiveness of classroom teaching. For example, teachers use the method of asking questions for a long time during teaching to guide students to think and express themselves in a progressive manner. This approach can to some extent exercise students' thinking ability, imagination ability, and memory ability for knowledge points. However, prolonged use of this method will bring a significant burden to students. Moreover, students tend to exhibit a tendency towards singularity in their subsequent thinking, making the classroom boring again.

5.4. The form of effectiveness evaluation is single and lacks specificity

In the new era of digital empowerment, vocational college students have sharp thinking, strong insight, and overly single course evaluations, such as "very good" and "well done", which have lost positive motivational effects for many students. They crave targeted and substantive evaluations that are in line with the views of others and are positive. These evaluations can play a positive and encouraging role in future diagnostic and reflective learning feedback.

Given the above challenges, we must deeply reflect and explore improvement strategies for scaffolding teaching methods to better meet the specific needs of maritime English teaching, thereby enhancing the efficiency and effectiveness of the entire teaching system.

6. The Application Effectiveness Strategy of Strengthening the Scaffolding Teaching Model in English Curriculum

6.1. Enhance students' comprehensive English abilities and improve classroom participation

The key to improving the practical effectiveness of scaffolding learning mode in English education is to enhance the comprehensive cultural literacy of English language among vocational college students. The achievement of this goal relies on motivating students to learn enthusiastically, thereby promoting their more active and dominant classroom interactions, and ensuring that the scaffolding learning model is effectively implemented in the teaching process. Therefore, teachers should make full use of contemporary information technology and strive to cultivate students' English cultural literacy. In this process, the role of teachers is not limited to imparting knowledge, but also as guides and facilitators of student learning. Teachers

need to design reasonable teaching activities and use rich teaching tools, such as multimedia demonstrations, online resources, and virtual simulation resources, to stimulate students' interest in learning and improve their English skills in listening, speaking, reading, and writing. In addition, teachers should encourage students to participate in group discussions, role-playing, and other activities to improve their practical language application abilities and critical thinking skills. Through these methods, the scaffolding teaching method can not only improve students' practical English proficiency, but also promote their ability to learn independently and solve problems. In addition, systematic training of core abilities such as professional English vocabulary, standard maritime communication terminology, practical listening skills at sea, and maritime document filling skills is crucial for consolidating students' language foundation and reducing their learning pressure. Ultimately, the cultivation of students' cultural literacy cannot be ignored. As language is a key medium for cultural transmission, integrating cultural elements in language learning can not only stimulate students' interest in learning, but also help reduce the difficulty of memory. During the teaching process, teachers can select real maritime pragmatics and materials related to the course theme from online resources, and build a knowledge framework based on these cultural backgrounds, so that students can better establish memory points and deepen their memory and understanding of language materials, thereby comprehensively improving their English comprehensive ability and laying a solid foundation for their subsequent learning activities.

6.2. Enhance the scaffolding construction ability of teachers and enhance the attractiveness of the classroom

Being close to the forefront of technology and flexibly utilizing digital technology to enhance the ability of scaffold construction has become a catalyst for teaching innovation. As a knowledge transmitter, teachers must be committed to learning and internalizing cutting-edge online teaching practices, integrating them with their personal teaching style, and shaping unique methods that align with their own teaching philosophy. This process can not only improve their teaching quality, but also promote their professional growth. Teachers need to maintain a keen insight into emerging and popular teaching trends. They should actively conduct in-depth analysis and critical thinking on these teaching methods, in order to extract valuable components from them and continuously optimize and upgrade their teaching framework. This continuous professional development is crucial for building a dynamic, diverse, and content rich teaching environment, with the ultimate goal of stimulating students' interest in learning and promoting their comprehensive development. The preparation of "sharpening the knife before cutting firewood" before class can more effectively cope with various teaching challenges that arise in the classroom; In class, the flexible use of animation, interactive multimedia tools, and audio-visual materials to construct flexible interactive activities, including task driven inquiry learning, group discussions, student personal sharing, and interactive games, all of which help to exercise and enhance students' mastery of English. After class, teachers should proficiently utilize online teaching resources, including teaching videos, practice questions, reference books, online libraries, and various English learning platforms, to provide students with a wide range of avenues for independent learning and research, and fully cultivate their learning abilities.

6.3. Dedicated to innovative and diverse teaching strategies, enriching the connotation and practice of scaffold construction

The scaffolding teaching model, as an innovative and highly integrated educational method, provides teachers with a flexible and diverse teaching approach, which can construct diversified teaching strategies. Teachers should deeply cultivate the curriculum and design activities that meet the teaching objectives of different project tasks in professional English, aiming to comprehensively cultivate students' language skills, including listening, speaking,

reading, writing and other abilities, as well as cross-cultural communication abilities. The use of brackets can not only enhance classroom interaction and practical activities, but also meet the diverse needs of students through personalized and differentiated teaching methods, significantly improving the quality of classroom teaching and ultimately achieving the maximization of English teaching effectiveness. As leaders, teachers should be committed to continuous innovation in order to achieve the dual goals of improving students' comprehensive English abilities and adapting to future social challenges. In order to enhance the practical effectiveness of learning, it is necessary to promote students to seek solutions to established problems through cooperative learning mechanisms. In this teaching process, the establishment of inquiry methods should encourage innovation, including the development of exploratory research, explanatory research, and descriptive research methods, to promote students to absorb new information through independent insight and understanding, and thus construct and consolidate their knowledge system. In the design of collaborative learning strategies, innovation should also be advocated, such as using association methods, meal mats, group puzzle methods, interactive reading methods, and peer review methods. These strategies ensure that students engage in collaborative collaboration under clear guidance by forming learning groups or partnerships, setting targeted learning methods and clear learning or exploration goals, and thereby comprehensively promoting the improvement of actual learning outcomes.

6.4. Building a diversified evaluation mechanism and leveraging the advantages of scaffolding teaching mode

In the field of education, the execution of teaching evaluation is entrusted with the important responsibility of testing and measuring teaching effectiveness. Its core functions far exceed simple critical scrutiny. The essence of teaching evaluation is to promote teachers' deep reflection on teaching practice and stimulate continuous motivation for teaching improvement. At present, the evaluation mechanism of teacher teaching quality tends to reflect through student performance, which leads to an evaluation orientation that leans towards results and neglects processes, that is, summative evaluation dominates, while attention to teaching strategies and implementation methods is clearly insufficient. Due to the lack of detailed evaluation of the use of strategies in the teaching process, the development of scaffolding teaching mode has been significantly constrained, only remaining at the level of scattered teaching attempts, and has not formed a set of widely applicable systematic teaching strategies to guide actual teaching work. Therefore, the potential advantages of scaffolding teaching have not been fully reflected. In order to ensure the synchronization of teaching evaluation system with educational goals and optimize teaching behavior, it is necessary to build an evaluation system that can accurately guide the teaching direction of teachers. This not only ensures that educational activities are carried out correctly and effectively, but also encourages teachers to revise and improve their educational concepts, thereby promoting their professional growth.

7. Conclusion

In summary, in the maritime English classroom environment, the scaffolding teaching model that integrates digital online and offline blended teaching methods has become an important way to improve teaching effectiveness. To effectively implement such teaching models, teachers need to make thorough preparations in advance, innovate and optimize curriculum design, in order to ignite students' learning enthusiasm and maintain their learning motivation and enthusiasm. This strategy will help students demonstrate initiative in future learning and effectively respond to new knowledge challenges. In order to continuously improve teaching effectiveness, teachers should conduct in-depth reflection and comprehensive evaluation of the teaching process and results after the course ends. Through these methods, not only can

teaching modes be continuously improved, but students' comprehensive English abilities, including language application skills and overall cultural literacy, can also be significantly enhanced. This series of measures aims to lay a solid foundation for students' future work and higher-level academic

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