

Reflections and Discussions on English Teaching in Computer Science

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Abstract: With the advancement of globalization and the rapid development of information technology, the importance of English teaching in computer science is increasingly prominent. However, there are many problems in current English teaching for computer science majors, such as outdated teaching materials, monotonous teaching methods, and insufficient teaching staff. This article first outlines the current status of English teaching in computer science, then analyzes the existing problems, and proposes targeted teaching strategies, including updating teaching materials, innovating teaching methods, and strengthening teacher training. Finally, the future development of English teaching in computer science is discussed.

Keywords: English teaching in computer science; current status; teaching strategies; teaching quality

Introduction

With the rapid development of technology and the deepening of globalization, computer technology and information technology have become important driving forces for global progress. As a medium for carrying and disseminating these technological information, English plays a crucial role in computer science education. Computer science English, as a compulsory course for computer science students, is of self-evident importance. It not only opens the door to international advanced technology for students but also serves as an important way to cultivate students' cross-cultural communication abilities and comprehensive qualities.

However, despite the increasing prominence of English in computer science, we can easily identify numerous problems and challenges in actual teaching

processes. Firstly, the content of teaching materials often lags behind industry developments, failing to timely reflect the latest technologies and applications in the field of computer science. This hinders students' access to cutting-edge knowledge during the learning process, restricting the expansion of their horizons. Secondly, teaching methods are often monotonous, lacking innovation and practicality. Traditional lecture-style teaching often makes students feel dull, failing to stimulate their interest and enthusiasm for learning. Additionally, the shortage of teaching staff is also one of the key factors restricting the improvement of the quality of English teaching in computer science. Currently, the number of teachers with the capability to teach computer science English is relatively small, making it difficult to meet the increasing teaching demands.



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Therefore, how to improve English teaching in computer science and enhance teaching quality has become an important issue facing us. This article aims to conduct an in-depth analysis of the current status of English teaching in computer science, explore specific problems existing in teaching, and propose corresponding improvement strategies. It is hoped that through these efforts, some useful references and insights can be provided for the development of English teaching in computer science.

1. Analysis of the Current Status of English Teaching in Computer Science

Currently, English teaching in computer science exhibits several issues across various aspects. Firstly, concerning the selection of teaching materials, some materials are outdated and fail to timely reflect the latest technologies and applications in the field of computer science. This results in students having difficulty accessing cutting-edge knowledge during their learning process, thus limiting the expansion of their perspectives. Secondly, regarding the teaching content, some teachers overly focus on grammar and vocabulary teaching while neglecting the cultivation of students' practical application abilities. Consequently, although students acquire a large amount of English knowledge, they are unable to effectively apply it to solving practical problems. Furthermore, concerning teaching methods, traditional methods such as lecture-style teaching still dominate, lacking innovation and practicality. This teaching approach often makes students feel bored and fails to stimulate their interest and enthusiasm for learning.

In addition to the aforementioned issues, there are also some underlying problems in English teaching in computer science. For example, students' English proficiency levels vary greatly, posing significant challenges to teaching. Some students have weak English foundations, making it difficult for them to keep up with the teaching pace, while others, although having good English foundations, lack understanding of the specificity and professionalism of English in computer science, thus struggling to adapt to teaching requirements. Additionally, the shortage of teaching staff is also one of the important factors constraining the improvement of the quality of English teaching in computer science. Currently, the number of teachers

with the capability to teach computer science English is relatively small. There are two types of teachers teaching computer science English: pure English teachers and computer science teachers. However, neither can effectively integrate English with computer science knowledge, making it difficult to meet the requirements of modern teaching.

2. Issues in English Teaching in Computer Science

2.1 Outdated Teaching Materials

Teaching materials form the foundation of instruction, yet some current English teaching materials in computer science are outdated, failing to timely reflect the latest technologies and applications in the field. This results in students having difficulty accessing cutting-edge knowledge during their learning process, failing to keep pace with industry developments. Additionally, the lack of practicality and appeal in the teaching materials makes it difficult to stimulate students' interest and enthusiasm for learning.

2.2 Monotonous Teaching Methods

Traditional teaching methods such as lecture-style teaching still dominate English teaching in computer science. This method often revolves around the teacher, neglecting students' subjectivity and participation. Students passively receive knowledge in the classroom, lacking opportunities for critical thinking and interaction, resulting in poor learning outcomes. Furthermore, the lack of practical components is another manifestation of the monotonous teaching method. Computer science English is highly practical; however, current teaching often lacks practical components, preventing students from applying their knowledge to solve real-world problems.

2.3 Insufficient Teaching Staff

Teaching staff are a key factor in teaching quality. However, the current number of teachers capable of teaching computer science English is relatively small, making it difficult to meet the growing teaching demands. Additionally, some teachers hold outdated teaching philosophies and methods, lacking innovation and practical skills, making it difficult to adapt to the requirements of modern teaching. This leads to uneven teaching quality, affecting students' learning outcomes and overall qualities.

2.4 Low Student Interest

Due to the specialized nature and difficulty of computer science English, some students lack interest in it. Coupled with issues such as monotonous teaching methods and outdated teaching materials, students' interest in learning further decreases. This results in students lacking initiative and enthusiasm in their learning process, making it difficult to achieve satisfactory learning outcomes.

3. Discussion on Teaching Strategies for Computer Major English

In response to the above issues, this article proposes the following improvement strategies:

3.1 Establishing a Student-Centered Teaching Model

In traditional teaching models, teachers often take the lead, while students are in a passive position. This teaching model neglects students' subjectivity and individual differences, making it difficult to stimulate their interest and enthusiasm for learning. Therefore, we need to establish a student-centered teaching model, fully tapping into students' subjectivity and initiative.

Specifically, teachers can adopt problem-oriented and project-driven teaching methods to guide students in active thinking and exploration. Additionally, activities such as group discussions and role-playing can be utilized to encourage students' active participation in classroom interactions, thus enhancing their engagement and sense of accomplishment. Through this teaching model, not only can students' interest and enthusiasm for learning be aroused, but their autonomous learning abilities and innovative spirits can also be cultivated. Furthermore, building a student-centered teaching model also requires attention to personalized teaching. Each student has unique learning styles and interests, so teachers should cater to individual differences and tailor their teaching methods accordingly. By providing diverse learning resources and activities, the diverse learning needs of students can be met, allowing each student to find their own interests and motivations in learning computer major English.

3.2 Introducing Diverse Teaching Methods

To improve teaching quality and effectiveness, it is necessary to introduce diverse teaching methods.

Diverse teaching methods can be flexibly selected and applied according to different teaching content and student characteristics to meet the learning needs of different students.

For example, we can adopt case-based teaching methods to help students understand and apply the knowledge learned through real-life cases. This teaching method allows students to gain a deeper understanding of the application scenarios and technical details in the field of computer science, thereby enhancing their practical skills and comprehensive qualities. Moreover, diverse teaching methods also include interactive teaching and situational teaching. Interactive teaching can encourage students to actively participate in classroom interactions and enhance their communication skills and teamwork spirit through activities such as group discussions and role-playing. Situational teaching can immerse students in real-life work or life scenarios, allowing them to learn and master knowledge in practice, thus increasing the practicality and interest of learning.

3.3 Strengthening Practical Teaching Activities

Computer major English is a highly practical course, so strengthening practical teaching activities is crucial. Through practical teaching, students can apply the knowledge learned to solve practical problems, thereby improving their application abilities and comprehensive qualities.

To strengthen practical teaching activities, we can organize students to conduct experiments and practical training. In the experiment section, teachers can design experimental projects related to the course content, allowing students to master relevant knowledge and skills through practice. In the practical training section, cooperation with companies or institutions can provide students with real practical opportunities and scenarios for learning and growth.

In addition, strengthening practical teaching activities also requires attention to the evaluation and feedback of practical results. By establishing scientifically reasonable evaluation criteria and methods and conducting comprehensive and objective evaluations of students' practical results, students can better understand their strengths and weaknesses, thus stimulating their learning motivation. Meanwhile, teachers should provide timely feedback and guidance to students, helping them summarize experiences,

identify problems, and improve methods, thus enhancing the effectiveness and quality of practical teaching. This approach can not only increase students' interest and enthusiasm for learning but also cultivate their innovative ability and problem-solving skills.

3.4 Enhancing Comprehensive Quality of Teachers

Teachers play a crucial role in the teaching of computer professional English. Their teaching philosophy, methods, and English proficiency directly influence the quality and effectiveness of teaching. Therefore, enhancing the comprehensive quality of teachers is the key to improving the teaching of computer professional English.

Firstly, teachers should establish advanced teaching philosophies, focus on individual differences and learning needs of students, and emphasize the cultivation of students' comprehensive qualities and abilities. Secondly, teachers should continuously improve their English proficiency, especially in the application of computer professional English. They can enhance their English proficiency by participating in English training and reading English literature. Additionally, teachers should actively learn new teaching methods and technologies, continuously explore and innovate teaching methods and means to improve teaching effectiveness and quality.

3.5 Establishing a Scientific Evaluation System

Establishing a scientific evaluation system is an important means to evaluate teaching quality and effectiveness. In the teaching of computer professional English, we should establish a diversified evaluation system, comprehensively considering students' knowledge mastery, application abilities, learning attitudes, etc.

Specifically, we can use various methods such as classroom performance, completion of assignments, project practice results, etc., for evaluation. At the same time, we can introduce student self-assessment, peer assessment, and other evaluation methods, allowing students to have a deeper understanding of their learning situation and actively participate in the evaluation process. Through this diversified evaluation system, we can more comprehensively understand students' learning situations and teaching effectiveness, providing a strong basis for improving teaching strategies.

4. Conclusion and Outlook

As an important means to cultivate students' international perspective and English communication abilities, the teaching of computer professional English is particularly crucial in the current globalized context. Through an in-depth analysis of the current situation of teaching computer professional English, we have identified some key issues such as outdated teaching materials, monotonous teaching methods, and insufficient teaching staff. Addressing these issues, we have proposed targeted improvement strategies, while also recognizing the numerous challenges and opportunities facing the teaching of computer professional English.

Firstly, with the rapid advancement of computer technology, the teaching content of computer professional English needs continuous updating and improvement. We should closely monitor the developments in the field of computing and promptly incorporate new technologies and concepts into teaching to ensure the timeliness and cutting-edge nature of the content. Additionally, emphasis should be placed on the practicality and interest of teaching content to stimulate students' learning interests and enthusiasm.

Secondly, innovation in teaching methods and approaches is also key to enhancing the quality of teaching computer professional English. We should actively explore diversified and personalized teaching methods such as blended learning, project-based learning, etc., to meet the diverse learning needs of students. Furthermore, leveraging modern educational technologies such as artificial intelligence, big data, etc., to develop intelligent teaching systems and resources can improve teaching efficiency and effectiveness.

Lastly, strengthening the construction of the teaching staff is fundamental to ensuring the quality of teaching computer professional English. Efforts should be made to enhance the training of teachers of computer professional English and improve their professional competence and teaching abilities. The teaching of computer professional English will continue to develop towards internationalization, informatization, and personalization. We will continue to deepen teaching reforms, innovate teaching modes and methods, and strive to cultivate more computer professionals with

international perspectives and English communication abilities, making greater contributions to the prosperity and development of China's computer industry.

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