

The Analysis of English Teaching in Engineering Courses

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Abstract: with the development of globalization, the communications with the world is becoming more and more common. As one of the main communication languages in the international co-operations, the importance of learning English has attracted a great number of people. Colleges and universities have carried out many strategies about the whole English teaching. It's obvious that the whole english teaching can improve students' english level to some extent. But for non-english major, especially for engineering students, the implementation of english teaching is a double-edged sword. In this paper, on the basis of the characteristics of engineering course, with the perspective of teachers and students, the advantages and disadvantages of English teaching in the engineering universityies are anamyzed. I hope that English teaching can make the best use of the advantages and bypass the disadvantages in the future.

English plays a more and more important role in international communication. The traditional English teaching mode with high input and low output can not keep up with the development of the times. Therefore, colleges and universities have begun to reform the whole English teaching mode. The whole English teaching mode creates a good language environment for the students. The result is obviously better than the traditional English teaching, but there are some disadvantages behind the good. For example, the implementation of the whole English teaching mode in engineering colleges and universities, because of the characteristics of the engineering specialty itself, as well as the theoretical knowledge points involved, especially the formulation of the theory and the derivation of the formula are mostly obscure and difficult to understand, which is quite different from the Liberal Arts, so it will be a huge challenge to carry out the whole English teaching. There are common characteristics in the same subject and specialty, and the characteristic of engineering course teaching is that students can apply the knowledge learned from textbooks to practice. At present, most of the research on the whole English Teaching of professional courses is about a certain course. Therefore, from the perspective of the influencing factors of the whole English teaching quality of professional courses, this paper summarizes the whole English Teaching Research of engineering courses, and puts forward some suggestions on how to improve the whole English teaching quality of professional courses.

1. Characteristics of Implementing English Teaching in Engineering Major

Compared with the traditional English teaching mode, the whole English teaching is more efficient and effective. The engineering specialty has many characteristics, such as involving more knowledge, covering a wide range, great social demand, increasing international scientific and technological exchanges, and many occasions requiring English. Therefore, the implementation of all English Teaching in engineering majors not only requires teachers to have strong professional quality, but also requires teachers' English expression ability and teaching methods.

2. Advantages of English Teaching in Engineering Major

2.1. Improve students' English level and enhance their professional quality.

All English teaching creates a complete environment for English learning. Students' listening,

speaking, reading and writing are conducted in the form of English, which will greatly improve students' listening ability, reading ability and language expression ability[1]. Concentrated English Teaching for engineering majors can enhance students' professional quality and lay a foundation for cultivating high-level and international comprehensive talents in China. At the same time, with the introduction of all English professional textbooks, the English professional vocabulary is more, more complete and updated. Students are easy to accept more foreign materials and documents after learning and mastering a large number of English professional vocabulary and being familiar with the logical structure and thinking mode of writing English textbooks. The speed of engineering technology breakthrough and update is fast, which requires teachers and students to be able to contact the latest international technology as early as possible.

2.2. Strengthen multi-cultural exchanges and promote the development of international friendship.

International communication has led to a sharp increase in the number of international students in Colleges and universities, as well as more English courses in Colleges and universities. In the past, there were two classes for the same course: English class and Chinese class. In some cases, the number of foreign students can not meet the requirements of opening a class. If we only open an English class for foreign students, it not only takes up unnecessary teaching resources, but also deviates from the original intention of foreign students to promote cultural friendly exchanges between countries through studying abroad. Then after the introduction of all English teaching, the two classes can be combined into one. In the large classroom where foreign students and Chinese students gather, the collision between different cultures promotes the exchange of multi cultures, not only saves teaching resources, but also exercises students' oral ability.

2.3. Train the ability of thinking and expression in English, and train the ability of reading and summarizing documents.

In the interaction between teachers and students in the class, students must think about problems from the perspective of English, and then express their ideas in English. While exercising their language expression ability, they also promote students to form the habit of expressing in English. Finally, practice makes perfect, and students' language ability will be greatly improved. After class, students are encouraged to think and express their ideas in the English environment. In addition, for the course report to be written, students need to consult a large number of English documents. In the process of consulting, students' ability to read, understand and summarize English documents will be greatly improved, laying a solid foundation for future scientific research.

2.4. Improve teachers' English expression ability and build a bridge for international academic exchange.

The whole English teaching mode will force teachers to express their opinions and analyze their knowledge in English, which will exercise their English expression ability. It is also a process of relearning for teachers, who will constantly mention their professional English level. In future international exchanges or academic reports, teachers will be more confident to conduct friendly academic exchanges with foreign professors and experts, master more cutting-edge technologies, and lead the academic community to conduct more advanced scientific research.

3. Characteristics of The Implementation of English Teaching in Engineering Major

3.1. Limited teaching time, limited English level.

For non-English major students, the uneven English level and limited learning time are the two mountains that affect the ultimate failure of English teaching. Engineering major involves a wide range of knowledge areas, offers many courses, and the time allocated to the whole English teaching course will be limited[2]. In this case, teachers need to compress knowledge points, build language, and try to instill all knowledge into students in a short teaching time. However, the potential harm of this phenomenon will soon come to the surface. The compressed English teaching

may make the students listen to the fog and ignore the deep exploration of knowledge points. Limited English level, poor English level or in the form of English teaching, limited teaching time to bring a sense of oppression to students, which is likely to lead to frustration and even weariness of learning. So for teachers and students, it's a battle with time, which requires their English level and professional quality.

3.2. Obscure engineering knowledge and hard to change habitual thinking.

Students' familiarity with English is quite different from their mother tongue. Combined with the complex and obscure characteristics of engineering professional knowledge, some complex theoretical knowledge is difficult to explain in Chinese, let alone in English. It is easy to cause students to be at a loss when they listen to the lesson, and affect students' deep understanding of knowledge points. In addition, the education, the environment, the way of thinking and the habits that students have developed from birth to now will hinder the implementation of English teaching. Once the habitual thinking is formed, it will be difficult to change. In the early stage of accepting the whole English teaching, students have been used to expressing in Chinese grammar structure and thinking mode, so it is difficult to fully accept the whole English teaching mode at once[3], and it is difficult to "translate" textbooks without using the inertial thinking, so as to make the culture in the course. In this case, it not only increases the students' study, but also affects the students' understanding and mastery of knowledge points.

3.3. The traditional teaching method, the whole English teaching mode.

The whole English teaching mode has a great impact on the traditional teaching methods. In the engineering teaching major, some theorem deduction is derived and verified step by step through complex and meticulous mathematical equations. For the explanation of this kind of knowledge, teachers have already had a series of methods for students to understand and understand quickly, but this method is based on the Chinese teaching mode. Therefore, after the introduction of all English teaching, this method is obviously not applicable, which requires teachers to change the original teaching methods.

3.4. For the teaching of non-English majors, it is easy to neglect the grammar structure.

In the process of implementing the whole English teaching, most of the engineering teachers emphasize the learning of professional knowledge rather than the learning of English itself, so there is always a disadvantage in the weight distribution. Under the pressure of heavy teaching tasks, teachers may not pay too much attention to the grammar structure when students express their ideas. Even if students make mistakes in grammar structure in classroom interaction, teachers may ignore them when both teachers and students understand each other's meaning. In this way, it is easy for students to form a wrong habit of grammatical structure, which deviates from the original intention of implementing the whole English teaching to improve students' English level.

4. Conclusion

English plays an important role in international communication, so the teaching of English quality can not be ignored, which means that it is imperative to implement the whole English teaching mode in engineering major. We should face up to the role and significance of promoting the whole English Teaching in engineering major. Everything has its two sides. The whole English teaching can't be perfect. Only when teachers and students adapt to it and improve it, and according to the characteristics of their major, they can benefit from the teaching reform and minimize the negative[4].

From the existing research, we can improve the English teaching quality of engineering courses from the following aspects.

First, teachers with overseas study or visiting experience are selected as teaching teachers. Establish teacher training classes, employ foreign teachers to train and assess the teachers. Set up a reward system to encourage good teachers. Second, we should try our best to choose practical

courses for all English teaching, and pay attention to the consistency of knowledge between all English courses and Chinese courses. Third, foreign original textbooks are preferred for teaching materials. When the time is right, self-made textbooks suitable for the course can be compiled according to the specific situation. For the courses which are closely combined with the practical application of engineering, the full English lecture notes of theory and experiment should be compiled according to the needs of the course teaching. Fourth, English teaching can adopt the teaching mode of teachers' guidance and students' leading participation. For the courses with strong engineering applicability, we can refer to the intuitive teaching mode of "one look, two listen and three practice".

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