

Analyze the Theory and Practice of Bilingual Teaching of Circuit Theory in Agriculture College

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Abstract: In the beginning of the article, we introduce the general situation of bilingual teaching of circuit theory and analyze the necessary of the education from the basic of knowledge and the development of science and technology. Base on that, we interpret the principles and object of bilingual teaching of circuit theory. At the same time, we analyze the teaching methods about circuit theory bilingual teachings from the materials, network resources, day-to-day counseling, exercises and so on. At last, based on the teaching practices about our college, we analyze the practicing matters and give some suggestions about bilingual teaching of circuit theory.

Keywords: Bilingual Teachings; Circuit Theory; Practice

1. Introduction

With the integration of global economic, the technological competition is becoming increasingly fierce. In order to adapt the global economy in cultivating talents, we are starting to focus on bilingual education in our university. Just now, we have joined the WTO. At the same time, our higher education has put forward higher requirements. Bilingual education has become a hot topic in education reform [1].

Our college is the first agricultural colleges in bilingual teaching experiment units. "Circuit Theory" is the first bilingual teaching courses in our college. Circuit theory in bilingual teaching is to make the students master the knowledge and develop circuit theory of thinking and innovation ability of students. At the same time, in order to improve students ability to analyze the problem.

2. The feasibility of the bilingual teaching of circuit theory

Circuit theory, as a foundation of electronic information engineering courses, is the most basic research of the circuit principle and the interaction law and the practical application of course. Its professional expression, meaning and terminology are relatively fixed. All kinds of language in understanding and explanation are consistent. In addition, in the face of the revolution of science and technology and the market competition, college students to improve the ability of self-awareness are growing [2-3].

Views from the foundation of knowledge, college students have some Basic English foundation and professional. They have learned English for six years or even

longer. At the same time, they have basic knowledge of physics electricity. College students in university physics learning stage have about the concept of electricity. So the English teaching materials for the use of circuit theory were well prepared.

View form the development of science and technology, Science and technology in the west, especially Britain, the United States and other countries to develop faster than the East. The US, the UK science and technology development, especially in electronic information engineering basic research is far more than other countries in the world. Because of this, most of the papers and academic exchanges should be carried out by English. Therefore, the organization and implementation of circuit theory is a bilingual teaching rising competition among universities in China the necessary measures. It is constantly to improve the English teaching needs and the development of modern electronic information technology needs. It is the students meet the needs of future development and competitiveness.

3 Circuit theory principles and objectives of bilingual teaching

3.1 Circuit theory principles of bilingual teaching

The principle of teaching is based on the objective law of the teaching process, the educational policy and the educational purpose. In the whole teaching, the principle of teaching must follow the principles of the basic requirements and guiding principles. Bilingual teaching of circuit theory should first follow the principle of gradual and orderly progress. Then, the timing of bilingual teaching should be continuous. At the same time, Bilingual teaching of circuit theory should be given to progressive content. Learning process with its own conditions is closely related to the knowledge. Anybody and any sub-

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ject of study can not be done overnight. So, bilingual teaching of circuit theory is no exception. Intellectual system can easily get difficult; we can gradually increase the proportion of English. Secondly, bilingual teaching of circuit theory should be in English using the principle of proportionality. In the teaching process, we can not ignore the role of the Chinese. Using the appropriate proportion of English and Chinese in the circuit theory can improve the quality of bilingual teaching.

The bilingual teaching of circuit theory should follow another principle which is taking the students as the main body and taking the teachers as guided. The important purpose of bilingual teaching is to improve the quality of education and improve students' quality and ability. This requires us to focus on the students. We have widely adopted the western concept of quality education and advanced education mode. We should give play to the students of the main advantages, pay attention to the communication between teachers and students, strengthen the interactive between students and teachers and improve the quality of teaching.

3.2 Circuit theory objectives of bilingual teaching

The language goal of circuit theory is improving the college students' English listening, speaking, reading and writing by the bilingual teaching. On the other hand it can cultivate students to communicate in English. Students can master the circuit vocabulary, concept and law. Students can discuss and exchange simple questions and can understand the relevant research reports. At the same time, students are able to read plain English circuit information and references.

The professional goal of circuit theory is improving the college students' basic theory and basic circuit analysis through the learning circuit theory.

The social goal of circuit theory is meeting social development needs and cultivating the high-quality talents of composite international. Through the bilingual teaching of circuit theory, it can improve students' professional and practical ability of English. It also can enable them to carry out a preliminary physical thinking in English and meet the communication needs of work and research. It can make contribution to society, the development of science and technology.

4 Circuit theory of bilingual teaching methods

4.1 Choose reasonable materials

Bilingual teaching must use the original English teaching materials. Because the original materials written in fluent English and used proper words. It not only provides regular modern science and technology, and contains samples of English native cultural knowledge of the amounts of information^[4-5].

English teaching materials for domestic and relative

contents of circuit is simple. Foreign materials focus on qualitative analysis and description of the circuit. However, more reliance on mathematical reasoning is a major feature of English teaching materials. Another big characteristic, it is practical, very the attention with vivid example to understand the circuit. Its theory with practice let a person feel circuit and the life is so close.

But we must be clearly aware that either domestic or overseas, English teaching materials, the level of all have very big difference. Bilingual education teachers must be based on the content of teaching materials need to choose, combined with the use of domestic materials in order to ensure the quality of bilingual teaching.

4.2 Use of abundant network resources

Network and multimedia information help students learn knowledge of circuit in English. Network for teaching and provides a new and powerful, the integration of information transmission media^[5]. The large capacity network diverse forms of bilingual teaching of circuit intelligent land resources together, lets the student breakthrough and fully exert students' learning potential. It can solve the problem; promote the students' personality differences in learning, the students' individual area to improve the teaching quality.

4.3 Routine counseling

Teacher's mission is to teach students knowledge and cognitive strategies, cultivation of circuit analysis in English skill. Teachers' guidance should penetrate inside and outside classroom and guide students to read English. Teachers' guidance can improve students' English coaching direct access to the professional knowledge and ability, to the basic requirements of circuit course.

4.4 Strengthen the students' practice

Students finished homework in the form of English. From this, to a certain extent, the students' mathematical analysis using exercise with English accurately express circuit analysis ability. Secondly, we must pay attention to the content of the assignments which students understand the basic concepts of the circuit. Students must through the circuit analysis, the English original data access operations in methods of inquires the information you need. Students in working with classmates are the basis for the better finishes their studies. Through this exercise, students not only consolidate knowledge, exercise the exchanges and cooperation with classmates, access to information, etc.

5 Problems and Solutions

5.1 Unity of teaching

Due to the limited class teaching content, the number of students, the current method is teaching. Explanation is essential components of class, but too much will make the

classroom teacher explained as a one-way taught. This lack of necessary interactive classroom, students' subject status is not reflected. In addition, the explanation for the students to accept method of transmission of knowledge and static knowledge, so that it does not favor the student arouses enthusiasm and initiative. This knowledge and experience has been more difficult to arouse the active reconstruction of new knowledge structure.

To change this situation, in the process of teaching according to different stages of the teaching requirements, flexible use of questions, discussions, assignments, etc., students can learn to understand the situation. We will speak of the students in the classroom to establish evaluation content, to encourage students' learning and to improve their language skills, thinking and knowledge mastery level. The homework by course content and form of nature, encourage students to write reports, papers, scheme and research, which will be applied in the practice of content.

5.2 Management mechanism imperfect

Due to the difficulty of implementation of bilingual teaching and the basis of weakness in universities and colleges in succession, the relevant supporting and encouraging introduced monitoring and evaluation, and policy. Such as increased class coefficient, teacher qualification, etc. But generally speaking, the lack of standardized management, proper guidance and the evaluation methods of strict organizational behavior. The competent departments for teaching several basic problems still not clear. For example, bilingual teaching English in the proportion of bilingual teaching quality evaluation and standard etc, these ambiguous factors for bilingual teaching practice has certain negative impact.

Therefore, colleges should set up a special group of bilingual teaching management, fully responsible for development of bilingual courses, organization, implementation and evaluation. Colleges and universities should

declare, record and bilingual teaching evaluation of bilingual teaching, strengthen the monitoring and the concrete implementation effect of the successful experience of promotion. Colleges and universities should establish and perfect the teaching quality monitoring and security system, at the same time, through the bilingual teaching curriculum system and promote the integration of teaching content, promote education concept and update the transformation, and the teaching method reform deepening education to the purpose.

6 Conclusions

In recent years, our college is in bilingual teaching achievements, but there are also many deficiencies and failure. Real effect to several ten years, these students or into society, to the forefront of research work will only truly is displayed.

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Reference

- [1] Wang Lishu, Liu Yan, Li wenzhe, "Study on Bilingual Teaching of Agricultural Engineering Specialized lessons", *Journal of Hei Longjiang College of Education*, Vol 29, pp.70-71,2010.
- [2] Lin Chunjing, "Practice and Exploration of Bilingual Teaching", *Journal of Guangdong Baiyun University*, Vol 15, pp.46-49,2008
- [3] Du Fang, Wang Songyan, "Thoughts on Bilingual Education Research and Training", *Journal of Sichuan College of Education*, Vol 26, pp.12-14, 2010.
- [4] Li Guishan, Feng Chenyu, "Structure of bilingual teaching module within joint academic major programs with overseas universities", *Journal of Higher Education*, Vol.30, pp.79-83, 2009.
- [5] Fan Yutao, "Comparative Analysis on Bilingual Teaching of Computer Courses in Colleges", *Journal of Higher Education in Science & Technology*, Vol.28, pp.119-121, 2009.