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ITJ

ISSN 1812-5638

INFORMATION TECHNOLOGY JOURNAL

ANSI*net*

Asian Network for Scientific Information
308 Lasani Town, Sargodha Road, Faisalabad - Pakistan

Discussion of Bilingual Education of Wood Science

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Abstract: Bilingual education is a great move of high educational reform in our country and is also a new question being faced by university teachers. The author discussed the bilingual teaching practice using multimedia under the present situation through using the foreign original teaching materials and conducted a questionnaire survey to measure the teaching effect. The results indicated that reasonable organization of teaching resources, using the foreign original teaching materials as well as domestic teaching materials as auxiliary and using the multimedia way to carry out the bilingual teaching of wood science course is feasible and also can get good teaching effect.

Key words: Wood science, bilingual education, questionnaire survey

INTRODUCTION

In order to adapt to the challenges of economic globalization and technological revolution, bilingual teaching in colleges and universities is an important way for quality education and is a beneficial trial of higher education teaching to adapt to the changing situation. At present, bilingual teaching practice is widely carried out in the national colleges and universities and related theory and practice research are being carried on (Yang and Mao, 2008; Chen, 2005; Zhang *et al.*, 2003; Huang, 2007). Wood science is a required degree course for the undergraduates major in wood science and technology and is an important basic special course which across the forest and forestry engineering and throughout the whole process of cultivation, processing and utilization of wood resources. Meanwhile, in the national wood science and engineering postgraduate exam, wood science is compulsory all the time. Therefore, the course plays a decisive role in undergraduate teaching and has been attached great importance by undergraduate in the forestry colleges (Zho and Dang, 2011). Since 2004, bilingual teaching reform and practice of wood science course has been carried out in the wood science and technology undergraduate majors in south china agricultural university. This article discussed and studied the bilingual teaching practice of wood science in recent years, objective analyzed the present situation and existing problems in bilingual teaching and provide the basis to perfect the bilingual teaching effect.

THE BILINGUAL TEACHING IMPLEMENTATION PLAN OF WOOD SCIENCE

Wood science is one of the compulsory courses for undergraduates major in the wood science and technology. The course contains wood anatomy, wood physics, wood chemistry, wood mechanics and wood environmental science and so on. The teaching plan of the undergraduates major in wood science and technology in the writer's university sets the course of wood science in the first term of sophomore year (the third term). And the students continue learning public English at the same time, so they have good ability of listening, speaking, reading and writing. It can provide a certain guarantee for implementation of bilingual teaching.

The bilingual teaching of wood science chooses "Forest Products and Wood Science-An Introduction" compiled by Jim L. Bowyer, US. as the English teaching material, meanwhile adopts the "Wood Science" edited by Yixing Liu and Guangjie Zhao as the Chinese teaching material. The teaching contents of the two books are nearly the same which helps students to further understand and grasp the course content through mutual complementation of English and Chinese teaching materials. In the teaching process, we make multimedia courseware with a combination of Chinese and English in reference of Chinese and English teaching materials and adopt the form in both Chinese and English to explain the basic concepts, meanwhile add a lot of pictures, charts and other information to make students have a better understanding and grasp the content of the courseware.

The teaching of the course is in both Chinese and English. The early part of the course teaching is in Chinese, the medium part in both English and Chinese and the later part adopting English teaching. In order to know the students' mastery of the teaching content, the teacher and students make active interaction. For the part which students can hardly understand, the teacher explains again with an overview in Chinese. To better improve the teaching efficiency, after class, the teacher looks for information actively to build a lexicon of professional English to provide the reference for the students. And it requires students to preview before the class to make sure they can better understand and grasp the course content in the class. The evaluating mode adopts the close-exam and the question type includes true or false questions, choice questions, reading drawing questions, calculation questions, short answer questions and essay questions and the true or false questions, choice questions, reading drawing questions, calculation questions are in English, requiring English answers, accounts for 50% of the exam score, while the short answer questions and essay questions are in Chinese which requires both Chinese and English answers.

THE SURVEY TOWARD THE EFFECT OF BILINGUAL TEACHING OF WOOD SCIENCE

The bilingual course of wood science is a compulsory course, 56 class hours totally, 3.5 credits,

including 44 theory course hours and 12 experiment course hours. This course has been open seven sessions and more than 400 undergraduates have attended the course. According to the difficulty of the course' teaching material, the teaching attitude and method, the teaching feasibility, the help to extracurricular English reading, the evaluation mode (Cao, 2012; Li and Du, 2002), we make an anonymous questionnaire survey toward the undergraduates of wood science and technology who are admitted to the university in 2010 and 2011. (For the details please see Table 1).

The results of the questionnaire survey show: (1) The students' views to bilingual teaching goal orientation views of wood science are basically consistent, the major students think the course should give priority to the teaching of professional knowledge, English is complementary, while a small part of students hold the opposite idea. It shows the students attach great importance to gain professional knowledge. (2) The opinions of the students are more concentrated toward the teaching method. The major students hope that the teacher use the English courseware and give lectures in Chinese in the teaching process of wood science, while very few students hope that the teacher use the Chinese courseware and give teach in English. It shows that the most students are good at in English reading while weak in listening, so they prefer English courseware and Chinese lectures. (3) The major students think the course of wood science is suitable for bilingual teaching, while the minority think it is unsuitable or have no idea of

Table 1: Questionnaire of wood science bilingual teaching nmit:%

No.	Question	Options	The class of 2010 (43 people)		The class of 2011 (46 people)	
			No.	Ratio	No.	Ratio
1	Target location of wood science bilingual teaching	Take professional knowledge as the principal thing and English as auxiliary	38	88	39	85
		T a k e English as the principal thing and professional knowledge as auxiliary	5	12	5	15
		Others	0	0	0	0
		Others	0	0	0	0
2	Form of wood science bilingual teaching	English courseware, teaching in Chinese	31	72	35	76
		Chin e s e courseware, teaching in English	2	5	4	8
		English courseware, teaching in English	10	23	7	16
		Others	0	0	0	0
3	Is wood protection and modified course appropriate for bilingual teaching?	Appropriate	33	78	38	83
		Not appropriate	2	5	1	2
		Not known	8	17	7	15
4	If chose not appropriate above, please select the reason	Don't have related teaching material	0	0	0	0
		Do not nnderstand	2	5	1	2
		Others	0	0	0	0
5	Evaluation mode of wood science bilingual teaching course	Closed-book exam, bilingual answer	35	81	34	74
		Closed-book exam, answer in English	8	19	12	26
6	Help to outside reading	excellent	11	26	13	28
		good	29	67	28	61
		common	3	7	5	11
7	The degree of teacher's attitude	excellent	25	58	33	72
		good	16	37	11	24
		common	2	5	2	4

whether it is suitable. Some students are weak in English, especially in the English listening, so they have difficulty understanding the English teaching content. (4) The major students support that the evaluating mode adopts the close-exam and answering in both English and Chinese while the minority support the close-exam and answering in English. It illustrates that the students don't have much confidence in the English expression of subjective questions. (5) The students give full affirmation to the teacher's attitude, but most think that the bilingual course won't help much in extracurricular English reading.

THINKING OF WOOD SCIENCE BILINGUAL TEACHING

Compile suitable teaching materials combining with the characteristics of wood science: Textbook is the carrier of teaching content, the basic tool for teaching and also the important guarantee to improve the quality of education. The choice of teaching material relates directly to the quality and effect of education. During the bilingual teaching practice of wood science, we directly import the foreign original teaching material and use it combining with Chinese textbook of wood science. Although foreign teaching material is original, the content and form is totally unsuitable for the demand of our professional teaching. Although it is used with Chinese textbook of wood science, the content, style and form of them have some differences which causes difficulties for students in understanding English textbooks. So Compiling teaching materials suitable for Chinese students is the most appropriate method for bilingual teaching at present. Many experts believe that, to fully guarantee the effect of bilingual teaching, a series of matching bilingual teaching materials should be compiled according to the actual situation of higher education in China. The school should enhance the support to the bilingual teaching and encourage teachers to publish bilingual textbooks for their major in order to ensure the further implementation of bilingual teaching.

Setting professional English courses as the basis of bilingual teaching: There are some differences between professional English and bilingual teaching in teaching content and teaching carrier. The content for professional English teaching is language learning in professional terms and the teaching carrier is more refers to the professional knowledge that the students has learned. But bilingual teaching is the other way around, the teaching content is professional knowledge and the teaching carrier is English (Liu, 2011). From the results of questionnaire survey, we can see that the students like

English courseware and teaching in Chinese. The major cause is that they have little professional vocabulary and can't grasp the content of teachers' teaching in an effective way during the progress. Related Chinese annotations of professional vocabulary are noted on English courseware. The students can grasp professional knowledge content of the courseware fast and accurate through reading the courseware. The solution for this situation is to set professional English courses in undergraduate course system in undergraduate program and to arrange study in the first year of college which will establish a certain foundation for the students in professional English.

Explore new mode for bilingual teaching: The students is lack of the professional English vocabulary and the English reading speed is slow. The solution for this situation is to demand the students to do the preview work and lay foundation for good teaching effect in class. Meanwhile ask the students read more related professional materials after class in order to increase students' knowledge and avoid using a lot of Chinese to explain professional knowledge in class.

Using English to do the classroom interaction between teachers and students is less. Students have great hope to improve their English ability through bilingual teaching, so we should to strengthen the interaction with students in English during the teaching. Consolidate what the students have learned through the way of asking questions, discussion, test and homework after class in order to achieve the desired results.

ACKNOWLEDGEMENT

Research special funds for public welfare projects (2012104006-8).

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