

Discussion on Training Mode of “Profession + English” Inter-Disciplinary Talents

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Inter-disciplinary talents with one professional skill and proficient in English are the type of talents most lacking in the Chinese market and most desired by enterprises. This paper presents a definition for the “profession + English” inter-disciplinary talents, and analyzes the demand of this type of talents by the society. On this basis, factors affecting the training of this type of inter-disciplinary talents are analyzed, and methods to realize this training mode are discussed from five aspects.

Keywords: Inter-Disciplinary Talents; Profession + English; Training Mode; Teaching Effect

Introduction

The rapid development of science and technology enhances the integration of different disciplines (Huang, 2009). In the modern world, all high level scientific and technological achievements are the fruits of the integration of different disciplines. With the increasingly frequent international exchanges and cooperation, the requirements for various kinds of specialized talents are higher and higher. Not only are they required to have solid basic skills and strong adaptabilities when facing with fierce market competition, they shall also have high English level.

Many scholars have discussed the training mode of “English + profession” inter-disciplinary talents (Han, 2007; Zhang, 2008; Dai, 2008; Huang, 2005), which takes the English major as the basis and allows students to learn an additional professional knowledge. This kind of training mode has its limitations. It only sets for students majoring in English, and these students can only learn professions of liberal arts, such as economics, finance, law, and business management. However, the training mode of “profession + English” inter-disciplinary talents is oriented to students of all majors, such as physics, chemistry, material science, computer science and technology, environmental engineering, automation, and medicine. The professional knowledge of these majors will be taken as the basis, and English rather than Chinese will be used to teach. While learning professional knowledge, their English will be improved. Some scholars believed that this kind of training mode is impossible to realize, and their reason is that the learning cycle of English is long, and learning English is hard when compared with the professional knowledge (Li, 2008). This point of view is not totally true. For people in their thirties, they have started to learn English from junior high school; those ten years younger have learnt English from elementary school; and those even younger have started since kindergarten. So the time we learn English is basically the same as that we go to school, however, the time we study specialized courses is only two to three years. So the training mode of “profession + English” inter-disciplinary talents can be achieved.

Definition of Training Mode of “Profession + English” Inter-Disciplinary Talents and Their Social Demand

Inter-disciplinary talents refer to the people with certain abilities in various aspects and outstanding abilities in a specific aspect. Experts pointed out that inter-disciplinary talent shall not only have outstanding experience in professional skills, but also have higher related skills (URL, 2012). Applying the above definition, the “profession + English” inter-disciplinary talents are people with outstanding experience in their major and high English level.

The training of “profession + English” inter-disciplinary talents shall not be the simple superposition of a major and English major. It shall be the organic integration of both majors, and it shall achieve the purpose of “1 + 1 > 2”. Therefore, the goal for the training of “profession + English” inter-disciplinary talents are taking professional contents as the bases and English language as the tool, integrating the language teaching with the teaching of professional theories and skills, cultivating the inter-disciplinary talents with solid foundation, extensive knowledge and specialities, as well as high English level.

The global economic integration is an inevitable trend. More and more foreign enterprises will invest in China to search for cooperation and development opportunities. Meanwhile, more and more domestic enterprises are going towards the world and striving for a larger market share. For a country, education must face the world, face the future and face the modernization to help China going to the world, allow the world to know China, and to realize the general objective of modernization. Therefore, popularizing English in the national level and cultivating more bilingual talents have become a strategic task. For individuals, the use of second language in studying, living and working is more and more needed and urgent than any other time. Like computers, English has become or is becoming the indispensable part in the living and working of more and more Chinese (URL, 2012). In the training mode of “profession + English” talents, the distance between the future job requirements and the

students English knowledge in terms, concepts, contents, practices and international codes can be shortened by using English as the language to teach. While teaching professional knowledge, students' English level can be further improved, which has great significance in strengthening the competitiveness of graduates.

Factors Affecting the Implementation of Training Mode of "Profession + English" Inter-Disciplinary Talents

To achieve the goals of training "profession + English" inter-disciplinary talents, the integration of professional contents teaching with language teaching shall be realized. And this has always been a challenge. If not handled properly, a series of problems will be generated. For example, students' understandings of professional contents may not be enough; the improvement of language learning may be limited; the pressures of teachers and students may be increased; and both teachers and students have to invest in a lot of time and energy.

There are many factors affecting the implementation of this kind of training mode, which can be mainly divided into auxiliary factors and decisive factors. The auxiliary factors mainly include the training program and curriculum, the teaching methods, and the availability of teaching materials. The decisive factors mainly include the inter-disciplinary teachers and the English level of students. These factors affect and restrain each other. They all play crucial roles in the implementation of this training mode.

Methods of Achieving the Training of "Profession + English" Inter-Disciplinary Talents

Improving the Training Program and Optimizing the Curriculum

For a training mode, the preparation of the training program and curriculum is very important (Studying team, 2002). The training program of "profession + English" shall meet the training goals of both majors, as well as the requirements of inter-disciplinary talents. Therefore, the selecting and cohesion of courses from both majors, the complementary of theoretical teaching and practical ability's cultivating, the progression from basic knowledge to professional knowledge, and other relations shall be properly handled. The adaptation to the requirements of economic globalization and social development shall be taken as the orientation, the realistic basis of the school shall be taken as the start point, and the prospects of economic development, as well as the changes of industrial structure and employment market shall be fully considered. Courses reflecting the frontier and helping to cultivate the students' practical abilities shall be offered. In the curriculum, the strengthening of practical ability and language capabilities shall be given the first priority. While reducing the theoretical courses, applied courses related to the discipline shall be added. In addition, the training program shall reflect the flexibility of the credit system, and students shall be allowed to select courses according to their bases, special skills and interests within certain scope.

For the curriculum of this training mode, English listening, speaking, reading and writing courses shall be strengthened in lower grades. English shall be used as a "language tool" for students to acquire. For professional courses in senior grades, teaching materials in English shall be used as much as possible,

and English shall be used as the language of teaching. In this way, students' English proficiency will be further improved during the process of learning professional knowledge.

Improving the Teaching Method

During the implementation of the training mode of "profession + English" talents, the teaching methods shall be improved and the teaching means shall be enriched.

The emphases for the training of inter-disciplinary talents are the comprehensive quality and the application ability of students. Therefore, students shall be viewed as the main body, and the interactive, heuristic and discussion type teaching methods shall be used as much as possible. In these teaching methods, students can participate in the teaching process. Teachers are still in the dominant position, but they are equal to the students, and debates are allowed in the class. This relationship orientation makes the class atmosphere active. During the communication process, teachers can find out the needs and problems of students, and thus find ways to solve these problems, and continuously improve the teaching quality.

The Several Opinions on Improving the Teaching Quality of Undergraduate Education in Colleges and Universities issued by the Ministry of Education of the People's Republic of China (document No.[2001]4) clearly states that teaching by English shall be actively promoted. The Ministry of Education issued another document in 2005 to further strengthen the teaching quality of undergraduate education, which requires the improvement of the quality of bilingual education courses, the further increasing of bilingual courses, and the promoting of international communication and cooperation among colleges and universities in undergraduate education. The education of graduates shall also promote the teaching by English, improve the quality of bilingual courses and increase their number.

The use of bilingual immersion teaching method (Wang, 2007) can improve the teaching quality of bilingual courses. The first modern language immersion programs appeared in Canada in the 1960s (Baker, 2006), and it has been proved to be very successful. We shall reference their experience. According to the class time, it can be divided into four types of immersion, which are complete immersion, partial immersion, content-based foreign language learning, and foreign language experience program (URL, 2012). The bilingual immersion teaching method is the partial immersion, about half of the class time is spent learning subject matter in the foreign language. The goals are to become functionally proficient in the second language, to master subject content taught in the foreign languages, and to acquire an understanding of and appreciation for other cultures. By using this teaching method, these goals can be achieved.

Selecting or Preparing Suitable Teaching Materials

Teaching materials reflect the teaching outline and the teaching contents. They will directly affect the teaching effect. Original English textbooks can allow students to experience the original staff, including the use of professional vocabularies, the expression of professional contents, the western professional teaching ideas, and the cognitive process of knowledge. Furthermore, the knowledge in the original English textbooks is new, which can reflect the frontier. So the proper original English textbooks are a good choice for this training mode.

If there are no suitable original English textbooks, teachers

can prepare their own teaching materials according to the practical situations. Attention has to be paid to two matters during the preparation of teaching materials. One is the organization of the teaching materials. The compromise type organization mode shall be used. The requirements and situations of the discipline and students shall be considered. Meanwhile, different emphases shall be placed on for different disciplines and for students in different stages of learning. The other is the arrangement of teaching materials. The spiral arrangement shall be adopted. In view of the acceptance ability of students and according to the complexity, depth and difficulty degrees, some basic principles shall be repeated in the teaching materials, and the contents shall be gradually extended and risen in a spiral shape. This type of arrangement can strengthen students' understanding of a principle, and help them master corresponding expressions in English.

Enhancing the Construction and Integration of Inter-Disciplinary Teaching Team

The construction of teaching team is the key in implementing the training of "profession + English" inter-disciplinary talents. Teachers must be familiar with the professional contents and proficient in English. Only in this way, the training goals of "profession + English" inter-disciplinary talents can be achieved. However, the lack of inter-disciplinary teachers is a problem faced by many colleges and universities. Some professional teachers are good at their profession, but poor at English, on the contrary, language teachers are not familiar with the professional contents. To establish the inter-disciplinary teaching team, the cooperation between professional teachers and language teachers shall be strengthened, and the colleges and universities shall provide systematic aid to help these teachers overcome their shortcomings, and improve their English level or professional knowledge.

The methods to solve this problem include: 1) Strengthen the communication and cooperation between professional teachers and language teachers; 2) Give full play to the leading role of teachers studying abroad, doctors, masters, and others with high English level; 3) Regularly send young teachers for short-term further study or intensive training at abroad, and establish the communication and cooperation between domestic and foreign universities; 4) Introduce talents with high English level and doctorate degree in relevant professions, such as computer science, construction, machinery, and materials; 5) Employ foreign experts and guest professors to participate in full English teaching and scientific research works; 6) Invite experts with experience in bilingual teaching to share their teaching experience.

Aiming at Students with Good English Level

Teaching and learning are two inseparable processes. The object of teaching is the subject of learning, and the best teaching effect can be achieved only when they adapt to each other. Therefore, the selection of students for the training of "profession + English" inter-disciplinary talents is the prerequisite and foundation. It cannot be denied that the English levels of students at colleges and universities in China are intermingled.

The training mode of "profession + English" inter-disciplinary talents has certain requirements for the English level of students. It is not suitable for all students. For students with poor English

level, it is unrealistic and unwise to implement this mode of training. In view of this situation, the English level of students shall be tested after their enrollment, and classes can be rearranged according to the test. Different classes shall apply different training modes, and the training mode of "profession + English" inter-disciplinary talents shall only be oriented to students with relatively good English level. In addition, the number of students in each class shall not be too many for this training mode. This will facilitate the implementation of interactive teaching, and the best teaching effect can be achieved.

All factors affecting the implementation of the training mode of "profession + English" inter-disciplinary talents mutually restrict each other, and not a single one can be neglected. Among these factors, the students' English level and the inter-disciplinary teachers are decisive factors. Good source of students can improve the training efficiency. Furthermore, the good English level and self-learning ability of students can make up the tension of teaching hours in a certain degree. Certain quantity of qualified inter-disciplinary teachers largely determines the quality and effect for the training of "profession + English" inter-disciplinary talents. The training program and curriculum, teaching methods and teaching materials are auxiliary factors. Suitable training program and curriculum can standardize the training of "profession + English" inter-disciplinary talents; proper teaching methods can improve the teaching quality and help to achieve the training goals; and the good teaching materials can reduce the burden on teachers, and facilitate the self-learning of students, and improve the teaching effect.

Conclusion

The training mode of "profession + English" inter-disciplinary talents is still in exploratory stage in China. In order to improve the English level of students while learning the professional knowledge, we have to integrate the training goals of both majors. During the implementation process of this training mode, we shall optimize the training program, improve the teaching methods, and select or prepare suitable teaching materials. Meanwhile, this training mode can only be implemented for students with relatively good English level, and excellent inter-disciplinary teachers shall be provided to support this training mode.

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