Exploration and Practice of Personalized Learning of Computer Basic Course for International Students

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ABSTRACT

Under the background of The Belt and Road Initiative, the number of international students coming to China has increased dramatically. This requires us to carry out research on computer basic teaching with a pioneering international perspective. This paper has formed our own theoretical system according to domestic and foreign research results and our own practical exploration. Taking Learner-centered Education, fully considering the cognitive characteristics of international students, creating a personalized and refined training concept, integrating and optimizing each teaching aspect. In research methods, using a combination of action research and case studies, focusing on school-based research, expending our efforts to include other issues, thus helping to create a new situation of the teaching of international students in China.

Keywords: Belt and Road, International Student Education, Computer Basic Course, Personalized Teaching

1. INTRODUCTION

The Belt and Road Initiative (BRI), also known as the One Belt and One Road Initiative (OBOR), is a development strategy proposed by Chinese Government that focuses on connectivity and cooperation between Eurasian countries. It was launched in September 2013 and October, when President Xi Jinping visited Central Asia and Southeast Asian countries. [1] "There are more and more international students from OBOR countries coming to China. In 2019 Over 500,000 international students come to China. The education of international students has become an important part of higher education in China. [2]

As the number of international students grows, the quality of talent cultivation is becoming more and more important. It will directly affect the development of international students and the reputation of the country. The University Computer Basic Course is the first computer course for freshmen. The purpose of the course is to help students to master the basic theoretical knowledge and basic operational skills of the computer, so that students can establish a theoretical and practical scientific viewpoint and lay a solid foundation for the following courses. Influenced by the particularity of international students, the basic computer education of international students is quite different from that of domestic college students, which is more difficult and complicated. [3] Hu Shan and Miao Miao [4] analyzed the content and media of Computer Basics course for medical students Zou Yang and Dai Yu [5] Developed the experiment of Computer Basics. Wen Liuying and Fang Yu [6] proposes a mixed teaching mode of computer foundation for international students based on Specified classroom. By analysing the teaching methods of the computer basic courses for international students of China Three Gorges University, the author focuses on the learners in order to explore the characteristics of the students studying in China so as to improve the teaching content, teaching methods and strategies in a targeted manner. Then combined with the results of practice, summed up and summarized a set of effective individualized teaching mode.

2. BASIC SITUATION OF INTERNATIONAL STUDENTS EDUCATION IN THREE GORGES UNIVERSITY

Three Gorges University is in Yichang City, which is known as the "Capital of Hydropower". It is a water conservancy and electric power college. The training of foreign students in Three Gorges University is based on the characteristics and advantages of water conservancy and hydropower. Since the combination of the Three Gorges University in 2000, the number of international students raise a lot. There are more than 1700 international students from 36 countries including Nepal, India, South Korea, Maldives, the United States, Vietnam, Laos, Malaysia, Japan, Austria, Kazakhstan, Jordan, etc. 80% are from 17 OBOR countries. With the continuous increase of the number of international students, China Three Gorges University focus on the reform and implementation of the education of international students, carry out a lot of researches and practices to improve the education of international students. In addition, the university also held special training courses to train talents for enterprises that have gone abroad and participated in the "Belt and Road" Construction. The university has also specially formulated a teaching and research project mechanism for foreign students to encourage research and innovation from the system to the method of teaching foreign students.

3. THE RESEARCH OF COMPUTER-LEVEL ABOUT INTERNATIONAL STUDENTS

3.1. Design of Questionnaire

This questionnaire is based on the freshmen and the number of students surveyed is about 100. The questionnaire includes the situation of using the computer before students are taught, and what kind of computer knowledge they need for their daily life. The questionnaire is in the form of multiple-choice questions and quiz questions for the international students to choose the appropriate answer according to the actual situation. The main contents of the two questionnaires are listed below for readers' reference:

3.1.1. The current degree of understanding of computers

Questionnaires mainly talk about the time when students get in touch computers and the degree of understanding of basic computer knowledge,

including computer literacy, computer operating systems, computer office software, etc.

3.1.2. The application of computers

Questionnaires mainly talk about the range of application of computer software in foreign students' lives. It mainly includes the frequency and proficiency of office software and mobile phone application, as well as the content that students are interested and expected

3.2. Analysis of the results of the Questionnaire

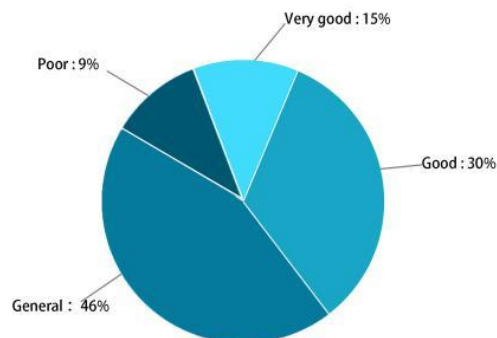### 3.2.1. Language communication barrier

Figure 1 Results of Chinese language level

From the pie diagram, we can see that the level of the English of international students is not the same. Because of the international students furthering study in our school come from all over the world, such as Nepal, India, South Korea, Maldives, the United States, Vietnam, Laos, Malaysia, Japan, Austria, Kazakhstan and other countries. Some international students' official language is English, some international students' second language is English, other students' English foundation is very weak, thus there are certain difficulties while teaching. Moreover, the level of oral English of the teachers is not the same. Because of this, there will be a lot of trouble in the process of communication with international students

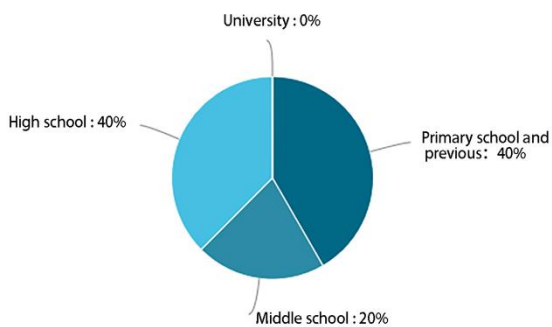### 3.2.2. The computer level of international students in China is uneven

Figure2 Results of duration of getting in touch with computer
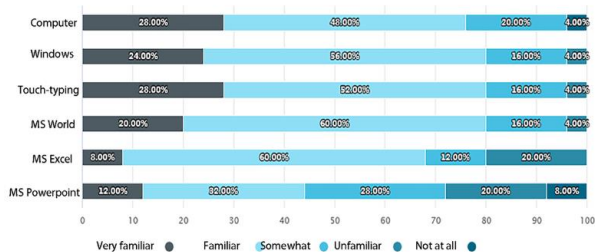

Figure3 Results of degree of using computer

Figure 2 and Figure 3 have clearly shown that the computer level of the students is uneven. Because each country's education system, cultural background, economic level is different, which international students come from. Thus, it makes each student using frequency and understanding to computer not the same. A small number of international students can skilled use computers to assist their own learning. Most students only use computers to do some basic operations, and they need to further study. There are very few students who have never touched partial operations of the computer, so they still demand to learn more. Faced with different levels of computer of international students, if unified teaching content is put to use, it will give rise to a lot of problems, such as the foreign students who have better foundations will face with insufficient content , low learning efficiency and the most point is it will waste their much time to study. Besides the students with weak foundations cannot keep up with the progress of learning, and they are struggling to learn and last lose their interest in learning about this course. Current content can't meet the personalized requirements
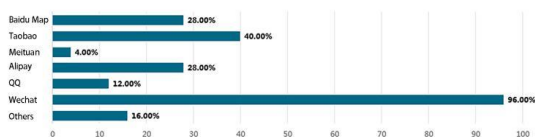

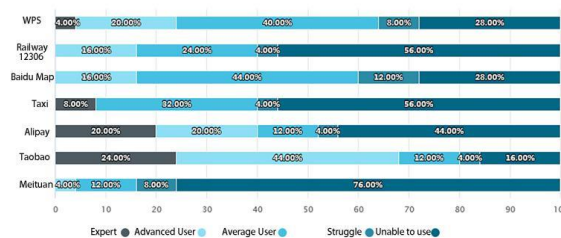**Figure4** Results of using mobile phone applications

Figure5 Results of degree of using mobile phone applications
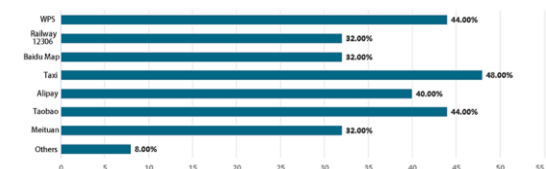

Figure6 Results of mobile phone applications that students want to learn deeply

From the bar graphs, we can draw a conclusion that the single teaching mode in the past cannot meet the personalized requirements of international students. Because of the computer basic course is a wide-ranging course, and it is also an evolving discipline. Due to the rapid development of the Internet, many new technologies and new knowledge have emerged, the teaching content of this course is also increasing. Therefore, it is important to learn this course well. This requires us to develop a teaching plan that keeps pace with the times. The society is becoming indispensable to mobile phones. Especially in China, many applications on mobile phones are closely related to our lives. Going out without a mobile phone will cause all kinds of troubles. This considers that owing to language barriers of international students in the daily life, it is more necessary to use mobile phones to complete some things for them. For example, using a mobile phone when going out to take a taxi, to pay something, to find a way or to content friends. Therefore, the rigid and single way of teaching in the classroom in the past has been unable to meet their daily demands. Moreover, the questionnaire has shown that international students more would like to learn more about the use of mobile phone application in their daily lives in addition to learning the basics of computers. They think these applications are their best helpers in their lives.

4. TEACHING INNOVATIONS

4.1. Overcoming language barriers

The teaching mode of the computer basic course is taught in English. English textbooks and English courseware are used. Due to the different English level

of foreign students, and oral English is not completely standard. This requires our instructors to continuously improve their English and oral English skills during the course of teaching, to communicate with each international student as much as possible, It had better do that teachers can understand what each foreign students saying and all international students can understand the contents of teaching of the lecturers. Besides, schools can also carry out some extracurricular activities. During the activities, the teacher tries to communicate with each student as much as possible, draws the distance between teachers and students, eliminates psychological barriers, and strives to clear language barriers for each student. At the same time, the school also holds an oral English training class every year to order to improve the oral English level of the instructors, which not only greatly improves the oral level of the instructors, but also lays a good foundation for some teachers to go abroad for further study. More importantly, the classroom quality of international students has been greatly improved.

4.2. Reformation of teaching method

Because of the computer level varies from person to person, this requires us to teach students in accordance with their aptitude. The specific measures are as follows:

First of all, we can arrange an unified computer test for freshmen, For those students with excellent grades, they can apply for exemption from this course, which allows them to spend more time to learn more advanced computer knowledge or schools can arrange some innovative computer projects for them to practice. and operate. This initiative not only improved their learning efficiency, but also improved their ability to innovate and practice.

Secondly, for those students whose foundations are relatively weak, teachers can take more care and encourage to them, and take more several classes for them, or they can arrange appropriate tasks for them after class, which make students use the spare time to strengthen the study of computer basic knowledge, cultivate its self-learning ability, and lay a good foundation for the follow-up professional course learning.

Finally, for most students with a certain foundation, we take normal teaching and establish an appropriate assessment system.

4.3. Reformation of teaching content

Learning must be in line with your own interests, so that you can have a harvest. In the teaching process, how to reasonably stimulate the students' strong interest in the curriculum is the key to the success of the teaching. The vital point is to let the students feel the benefits of learning. Therefore, in the course of

teaching, we should be good at connecting with the reality, combined with examples, consciously introduce the newer frontier content about computers into the teaching. In today's society, the life- style of mobile phone applications have brought us great convenience, but for foreign students, due to language barriers and cultural differences between countries, they will encounter a variety of problems when they use daily mobile phone software, such as Alipay, Taobao, etc. From the questionnaire can also be seen that they hope to explain the use of these software. This requires us to introduce these applications into the classroom, using the teaching methods of case teaching, so that students can use the theoretical knowledge they have learned in class to solve practical problems in their life , so as to cultivate students' ability of analyzing and solving problems. For example, in the process of teaching, when teachers explaining the contents of data processing and cloud computing, the basic principles of the similar item pushing function in the online shopping software that they are interested in can be as an actual case to analyze deeply, and combining the theoretical knowledge of the classroom and application software ,which allows them to understand the basic principles in the process of practical operation, making the classroom explanation more vivid , and the interaction between students and teachers will increase, so that the classroom has great flexibility and achieves a good teaching atmosphere. After each class, the teacher can arrange some practical small tasks, focusing on making the students proficient in what they have learned and deepening their understanding. Moreover, it is also the easiest way to improve students' self-learning ability and to exert their creativity. Let students apply classroom knowledge in their lives better.

5. CONCLUSION

International students are foreign students who learn in our school. Their teaching quality and teaching results directly affect the career development of foreign students and the country's reputation. Because the basic education, cultural background, and growth environment of international students are not the same, there are differences in all aspects of enrollment. These differences directly lead to inconsistencies in teaching. This requires us to carry out innovative reforms in teaching from the aspects of teachers, teaching materials, teaching methods, and student management considering the actual situation and the background of the times. Investigating and studying the characteristics of learning behaviors of international students, understanding their learning styles and characteristics, resetting the appropriate teaching content, targeted teaching methods and strategies for foreign students, these greatly stimulates the students' interest in learning and further enhances

their subjective initiative, thus improving the teaching effect. And laid the foundation for the subsequent establishment of relevant boutiques for the international student courses in China.

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