

Research on the Practical Teaching Method of Cultivating Innovative Talents in New Engineering

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Abstract: With the rapid development of science and technology, in order to meet the needs of the current scientific and technological revolution and social development, and welcome the new challenges that may occur, so the concept of “new engineering” came into being. With the advent of the information age and the rapid development of emerging industries and advanced science and technology, the state should pay attention to the cultivation of innovative talents. Therefore, in the process of teaching in colleges and universities, we need to pay attention to the cultivation of students’ innovative ability and practical ability for compound talents cultivation. This paper analyzes the current situation of innovative talents training at home and abroad, and explores the practical methods of innovative talents.

Keywords: New Engineering; Innovative Talents; Practical Teaching

In 2017, in order to comply with the trend of the world and seize the new opportunities and challenges of the development of scientific and technological revolution, China put forward the concept of “new engineering”, so as to promote the further revolution and development of China’s industry. Therefore, under the background of new engineering, colleges and universities need to change the traditional teaching ideas and teaching methods, build new talent training mode, and improve students’ innovation ability and practical ability, so that students can adapt to the needs of social and technological development, and inject talents into China’s industry 4.0 construction.

1. The current situation of the construction of innovative talent training mode at home and abroad

1.1 Status quo abroad

Developed countries have a high level of economic and technological development with a deep industrial foundation. In the 1990s, western developed countries have attached great importance to the cultivation of innovative talents. In some foreign universities, such as Cambridge University, Oxford University and Harvard University in the United States, the cultivation mode of innovative talents has been constructed for a long time, and the innovation and practice ability of students are put in the most important position in teaching. In the western developed countries, for many colleges and universities, actively comply with the trend of the times, carry out the reform of school system and teaching scheme, and add some innovative and

practical teaching content^[1]. At present, after more than 20 years of development, the training mode of innovative talents in western countries has been basically mature. It not only met the needs of the development of the times, but also trained a large number of innovative and practical talents for the development of western developed countries.

1.2 Current situation in China

Compared with developed countries, due to the late start of China's industry, short development time and weak industrial foundation, although China has made certain achievements in economy and science and technology, there are still many deficiencies. For the cultivation of innovative talents, after a period of exploration, some achievements have been made, but it is still in the stage of exploration and practice. The training mode of innovative talents is not mature. After the reform and opening up, China's industry and science and technology have developed rapidly, and the economic construction has also made good achievements. Therefore, in the process of development, the demand for innovative and applied talents has gradually emerged. At present, in many colleges and universities in China, the cultivation of innovative talents has been gradually included in the program of school development. Especially since the concept of "new engineering" was put forward, China's colleges and universities pay more attention to the cultivation of innovative talents. For the construction of innovative talents mode, some achievements have been made and gradually become mature^[2].

2. Practical teaching methods of cultivating innovative talents

2.1 Improving the training program of innovative talents

Talent training program is the general policy of teaching in colleges and universities. It is helpful to promote the cultivation of innovative and applied talents by improving the training scheme of innovative talents. In the new engineering concept, students must have strong innovation ability and practical ability. Therefore, in the process of teaching, the school needs to combine its own actual situation and carry out teaching reform according to the innovative talent training mode, and improve the innovative talent training program. For college students, in addition to paying attention to the teaching of professional knowledge in class, it is also necessary to pay attention to the cultivation of college students' innovative and entrepreneurial thinking, and to jointly cultivate the quality of both inside and outside class, so as to improve students' practical ability and innovation ability. At present, for most colleges and universities in China, innovation and entrepreneurship courses have been set up, but for the results of these courses, there is a lack of effectiveness. The most important reason is that the school, in the teaching process, often pays attention to theoretical teaching, lacks of certain practical teaching. So, the school can integrate various teaching methods into the innovation and entrepreneurship teaching in the process of teaching to enrich the form of innovation and entrepreneurship teaching mode, improve the practice teaching of innovation and entrepreneurship, so as to increase students' understanding of innovation and entrepreneurship, and improve their innovation ability and practical ability.

2.2 Building a practical platform for cultivating innovation consciousness

With the rapid development of science and technology, especially after the new engineering concept theory was put forward, colleges and universities gradually pay attention to emerging engineering majors, including artificial intelligence and big data. Therefore, it is necessary to pay attention to the construction of new professional knowledge and practice in colleges and universities. In the process of teaching, schools can encourage students to participate in innovation and entrepreneurship practice by organizing practical activities, which can not only improve students' learning enthusiasm, but also improve their practical ability. At the same time, schools can also set up innovation and entrepreneurship competition, so that students can actively participate in practical activities. At present, in order to adapt to the development of society, many colleges and universities in our country have created innovation and entrepreneurship bases, but in these bases, it is mainly publicized for freshmen and sophomores. Therefore, in the process of publicity, the innovation and entrepreneurship base needs to publicize the four grades, so that all the students from grade one to grade four have the opportunity to participate in the innovation and entrepreneurship activities. At the same time, for many colleges and universities, in the selection of members of the innovation and entrepreneurship base, mainly choose some students with good results, but this leads to the polarization of academic performance. Therefore, for the selection criteria of the members of the innovation and entrepreneurship base, it is necessary to relax the selection conditions so that some students with interest in innovation and entrepreneurship can enter the innovation

and entrepreneurship base, so as to realize the popularization of teaching and improve the innovation ability and practical ability of each student.

2.3 Strengthening cooperation between schools and enterprises

Colleges and universities are the cradle of talent training, and it is of great significance to the development of society to transport a large number of talents for the development of society. Meanwhile, for local colleges and universities, it can effectively promote the development of regional economy. Therefore, with the new concept, in order to improve the students' innovation ability and practical ability, we can strengthen the communication between schools and promote the improvement of students. For example, through the way of "integration of production, study and research", we should strengthen cooperation between schools and jointly explore the innovative talent training mode^[3]. At the same time, the school should strengthen cooperation with enterprises and actively build a platform for cooperation between schools and enterprises. Through the enterprise, teachers are encouraged to be registered in the enterprise, so that teachers can get advanced enterprise knowledge and improve their teaching ability. Meanwhile, employees can also enter the enterprise for teaching. By strengthening the practical guidance to students, students' practical ability can be improved. In the process of cooperation with enterprises, students are invited to enter the enterprise for practice to improve their practical ability by adopting various ways. Through the cooperation between school and enterprise, students' innovative thinking and practical ability can be improved by different ways. First of all, through school enterprise cooperation, the school can organize students to visit the enterprise regularly, so as to increase students' understanding of the major, improve their practical ability, and enable students to obtain a clear understanding of their own specialty. At the same time, the school can enable some senior students to enter the enterprise for internship, so as to accumulate practical experience in advance and help them to enter the society in the future. Secondly, through school and school cooperation, we can carry out innovative practice exchange activities between schools and organize interactive learning between teachers and students. By increasing the communication channels between schools, in addition to improving students' innovative thinking, it can also improve students' language expression ability. At the same time, the innovation practice competitions can also be organized between schools, in order to improve students' enthusiasm for innovation and practice and enable them to actively participate in.

3. Conclusion

Although China's current training mode of innovative talents has made some achievements, compared with developed countries, there are still many deficiencies. Therefore, by improving the training program of innovative talents, building a practical platform for cultivating innovative consciousness, and strengthening the cooperation between schools and enterprises, the practical teaching of innovative talents training can be strengthened, and the students' innovative consciousness and practical ability can be improved.

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