

Promoting the Innovative Personnel Cultivation System of Local Universities by Personalized Education

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Abstract: The close integration of scientific research and innovation personnel training is an important support in building innovative nation. This article analyzed the concept of personalized education and the problems in the process of local colleges. The approaches and strategies in personalized teaching were discussed on the basis of the practices of Hebei University of Science and Technology. It is pointed that the promotion of personalized education is an important way to establish the scientific innovation system and cultivate innovative talents.

Keywords: Personalized education, Personnel education, Local universities

1 Introduction

The key to cultivate creative talents is innovation. *National Middle/Long Term Scientific and Technological Development Plans of China* (2006-2020), has put forward the idea of building an innovative country for the goal. The famous “Question of Qian Xuesen”—“why can’t our colleges cultivate outstanding talents?”^[1] Is a puzzle about the development of education in China, the solution to which needs the effort of the entire education community even the whole society? Academician Zhu Qingshi, the president of South University of Science and Technology of China, has said that “Question of Qian Xuesen” attributed to the loss of “university spirit”^[2]. He has also pointed out that to truly improve the academic job, the university should process the “university spirit” which means what the university advocates and what it pursuits. Education expert Xiong Bingqi pointed out, the “diversified evaluation system of the United States, undoubtedly guides the students to personality development, learning knowledge and engaging in things they’re interested in, as these will be evaluated and concerned in the college admission”. However, this is not true of the educational evaluation system in China. “Personality development is a very difficult thing and it is difficult for personalized talents to survive^[3]”.

This is a time when the mass and elite coexist under the higher education, and all higher education institutions have the chance to cultivate elites. Local colleges and universities are the main force of higher education popularization. All the factors including the liberation of thought, reasonable position, scientific decision-making, strengthening quality management, solid undergraduate foundation, innovative training model, highlighting the school characteristics can maintain the elitism of public education and make due contributions^[4]. Undoubtedly, technological innovation system and the cultivation of creative talents have become the key problems in the development of our country. The author thinks that if the “Question of Qian Xuesen” was taken as a complex equation, then “focusing on personalized education” is a feasible solution to this math problem.

2 The Concept of Personalized Education

The so-called personalized education is to train and develop students’ good personality, which is corresponding to the educational model of uniform education^[4]. “Personalized education emphasizes the main position and the motivation of their subjective initiative. The educated acquire knowledge and enhance the ability through their active participation^[5]”. Personalized education, showing sufficient

respect for the individual differences and personal willingness, pays attention to the main role of the students' personality in education, which is conducive to the development of the intellectual potential of the students and the improvement of their creative ability. Personalized education is to achieve the goal of self-development and self-exceeding of individuals on the basis of general education. With this concept of education, the individual is no longer a passive recipient who takes understanding, accepting and adapting the socio-culture as the sole purpose of education, but a person with sound personality, creativity and pioneering talent who is bound to meet the needs of the society through education, turning "want me to do" into "I want to do". It should be stressed that the personalized education should meet the social demands for talents, but also respect and develop the students' personality, so that each student gives full play to their creativity by meeting the requirements of the society. The personalized education and general education are like the "required action" and "freestyle" in gymnastics, both of which are interrelated and mutually reinforce, deserving to be balanced. The personalized education differs from "personality education", neither equivalent to the specialty education as "the Olympic class" in primary and secondary schools. The significance of the personalized education does not just lie in the reform in teaching methods and contents; it is the innovation in the aims and value of education.

3 Problems of Local Colleges and Universities in the Process of Personalized Education

There are more than 2,600 existing colleges and universities, among which more than 100 are directly under the central management, the remaining more than 2,500 the local ones^[6]. The local colleges and universities are the main parts of our institutions of higher learning, whose development and quality determines the overall level of China's higher education. At present, China's colleges and universities, especially the local ones, have clearly recognized the necessity of personalized education and put it into practice. From the implementation point of view, there are still some problems, mainly including the contradictions between the generalized education and personalized education, the imperfection of evaluation system of teachers' performance and the lack of teaching resources, which to some extent, restricted the development of personalized education.

3.1 Common training system and personal development

Graduates are the main products of higher education, a kind of special product. Since any kinds of products have a certain standard, there is no exception of talents. Just as ordinary products have national standards or international standards, the graduates should have college standards. There is a high degree of stability and identity in teaching content and evaluation of talent training programs in colleges and universities, which pays attention to commonality of students in teaching design, setting up teaching plan and evaluation methods. However, since the students are from different sources (like the different materials of the product), the college performance are uneven and the requirements on jobs varied widely, the same cultivating requirements and unified design of teaching system are difficult to meet the growing needs of the students' personality development. As the main force of cultivating applied talents, local colleges and universities should first ensure the quality of talent cultivating, and at same time, make more flexible cultivating plans and set up different optional programs in order to conduct personalized training to those who have different basis, hobbies and potential, achieving the combination of generality and individuality in the process of teaching. As a result, graduates can reach the standard of uniform cultivating and develop their individual potential at the same time, thus the benefit of school-operating efficiency is at its maximum.

3.2 The imperfection of the teachers' performance evaluation system

University teachers undertake various aspects of work including teaching, scientific research, social services and cultural transmission, which need to undergo the annual assessment and engagement examination. The contents of the assessment and examination include teaching hours, the number of

teaching and scientific research projects one has undertaken as well as the published papers and books, while the specialized personnel training and personalized teaching activities are rarely taken into account for assessment. For instance, the teachers' guidance for students in extra-curricular innovation and social research activities is hard to be included in the credited-workload. Sometimes, even if the level and number of the awards can be considered, since the award-winning students and projects are in the minority, it's easy to consider the credit that can be seen and account, but hard to record the toil they paid overtime. Personalized education requires teachers to spend more time and energy in the teaching research, and it is difficult to present the effect of training within a short time, which is bound to cause the disagreement between the existing evaluation system and the needs of personalized education, thus the enthusiasm of the teachers is adversely affected.

3.3 The shortage of teaching resources allocation

Since they are subordinate to provinces, municipalities and autonomous regions, the local colleges and universities get lower investment which could hardly meet the high demands for personalized talents cultivating. Being funded by the "985" and "211" projects, the teaching environment, equipment in the key universities has been greatly improved, producing good personal cultivating conditions, but as for the local colleges and universities, there is a large gap between their capital investment or infrastructure and the demands of personalized talents cultivating. For instance, in the first place, the personalized education sometimes needs professional division. In many colleges and universities, students in the same specialty are divided into the regular class, the experimental class and the "excellent class". The same class carries out extra-curricular activities in the form different groups, which needs the adding to the basic teaching workload. Secondly, funds are need in the newly-added teaching programs and innovative research education needs. At last, there is a lack of an area for the students to do independent innovation research and the social practice platform to carry out the practice both on and off campus. As for the engineering colleges, to carry out the teaching practice activity characterized by personalized cultivating, they need a fully-functional and well-equipped practice teaching based on campus. Besides, the colleges are required to be well-organized in increasing the investment and establish the practice base off campus by closely related to the society in order to meet the need of the personalized practice. There are still some difficulties for many local institutions on this aspect.

4 The Construction of Personalized Education Strategies and Teaching Mode of the Local Colleges^[7]

Developing the characters of college students and stimulating their creativity is the trend of higher education. To make students adapt to the society, the local universities are required to implement personalized education, develop innovative education, cultivate high-quality and innovative talents. When carrying out personalized practical strategies, priorities should be set to reforming the traditional teaching mode, establishing the system of personalized training system and constructing the teachers' team as well as creating a relaxed and open teaching environment. Since 2005 Hebei University of Science and Technology has began to actively explore the personalized education mode of higher education, the basic idea of which is to form the "student-centered" consensus, establish the pluralistic system and the guarantee mechanism and create a cultural atmosphere for character development.

4.1 Centering on "students-centered" idea, building environment of personalized development

The essence of personalized education is "student-centered" education. Hebei University of Science and Technology has made a lot of efforts on this. The undergraduate training plan has been modified for three times to demonstrate the innovative education during its reform. In 2006, the university focused on promoting the growth of personnel by tutorial system, setting up class tutorial system in among doctoral students and opening the laboratory. In 2009, the university promoted the innovative education platform; the model airplane team of the university began to cut a figure and won the gold medal repeatedly in the

national competition. In 2010, the Students Day centered on “advocating care for students, stimulating enthusiasm of innovation” provided a platform for students to demonstrate their characters. In 2011, the university held a meeting especially for the purpose of promoting the personalized education, proposing to establish the idea of “centering on the students, serving the students” in the campus-wide range and set the concept of “everyone-to-be talent” and “diversified talents”, requiring all the teachers to respect the individual differences and different needs to promote the growth of each student.

At present, the university has formed a good atmosphere for the implementation of personalized education. “Student-centered” idea has been recognized by the teachers and has gone deep into the education and teaching process as an important principle guiding the reform of teaching practice.

4.2 Equipping students with personal tutor the as the entrance to the university

Tutorial system was an innovative measure for the cultivation of the undergraduate proposed by the university in 2006, the core value of which is “personal growth” system is embodied in the “tutorial system”, which is currently the most complete system for the personalized education. Under this tutorial system, the students get individual tutoring in their major; guidance ideologically and in life, psychological counseling and all-round development, thus the tutorial system has become a “guiding man” to guarantee the healthy growth of the students. The tutors’ duties include assisting students in their courses selection, helping students make their personal development plan in university even the life plan, conducting regular discussions and counseling.

Initially designed by Hebei University of Science and Technology, this tutorial system for students’ personal growth is an integrated management system combing education and teaching, based on the concept of personalized education, which aims to further practice the idea of “educating with all members and educating in an all-round way”, and enable the students to learn things in an effective way quickly and grow in a healthy way with the human-oriented individual guidance.

4.3 The establishment of effective mechanism and incentives for teachers’ participation in personalized education

To mobilize the enthusiasm of the teachers, the university has launched the school visiting program for teachers for the purpose of expanding the their academic horizon, sending the young and mid-aged backbone teachers to visit the well-known universities both in and abroad to learn the advance teaching philosophy, teaching methods and management experience; besides, every summer, a number of English teachers and leading bilingual teachers are sent abroad for further studies to improve their English proficiency and professionalism, laying a good foundation for the development of personalized education. In terms of the post appointment, the university will further deepen the reform of post allowance, increase the support for the introduction of talents, new specialties, key disciplines and give full consideration to the projects undertaken by teachers in guiding the students and as well as their achievements. Meanwhile, the rated teaching hours decreased from 330 class hours to 300 class hours per year, in order to reduce the workload of the teachers and guide the teachers to put more energy in the job of personalized education. What’s more, the preferences are given to the rated teaching hours in the 7th semester of undergraduate personalized education module, and some financial support is also given to those teachers who instruct the open experiments.

5 Conclusion

The implementation of personalized education has achieved fruitful results. In the past five years, there are more than 500 achievements in scientific research, among which 143 are provincial level or above. In the national College Mathematical Contest in Modeling, Electronic Design Contest and National “Challenge Cup” College Extracurricular Academic Technical Works Contest, both the number and the grade of awards of Hebei University of Science and Technology ranked the forefront of the colleges and universities in Hebei Province. Meanwhile, the implementation of personalized education has promoted

the overall quality of the teachers and the education level of the university. By the end of 2013, Hebei University of Science and Technology has been granted six national characteristic specialty construction projects, two national level teaching teams, two national experimental teaching demonstration center, two national high-quality courses and one national bilingual demonstration class, which has provided a good platform for improving the quality of talent cultivating.

Of course, there are still some difficulties and problems: the construction of the institutional system need to be furthered; teacher evaluation system should be linked with the personalized educational outcomes; students' scholarships should be linked with their personalized learning; the levels of personalized education among different majors are uneven; how to deal with the relationship between postgraduate-entrance examination and the personalized cultivating (including cultivating of outstanding engineer). The proper resolution to these problems will help the smooth development of personalized education.

Based on many years of participation in the practice of personalized education, the author thinks that for the local colleges and universities, on the basis of personalized education, enhancing teaching innovation by innovation in scientific research, stimulating the students' innovative awareness and potential, they can cultivate high-quality applied talents with innovative ability and consequently promote the innovative talents cultivating system. It is believed that strengthening the students' personalized education can, to some extent, answer the "Question of Qian Xuesen".

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