

Discussion on the Cultivation of College Students' Ability of Practice and Innovation

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Abstract

As an important mechanism of training senior talents, University should develop practical and creative talents. Higher education on college students' practice ability and innovation ability has an important role, which is directly related to the pace of our country's modernization construction and concerns the future of national development. Through the analysis of our college students' practice and innovation abilities, it is pointed out that there are some questions in the development of students in their practical and innovative capabilities, such as the lack of interest or desire as well as ability to deal with practical problems; so it is urgent to put forward available measures to improve the situation on the following aspects: the build on the construction of both teacher team and reasonable curriculum system conducive to the cultivation of innovative ability.

Keywords

Practice Innovation; Problems; Training Measures

Introduction

Innovation is the soul of a nation's progress, and is an inexhaustible motive force for national prosperity. Training is the key to a national innovation and personnel training lies in education. Colleges and universities play the fundamental role in technological innovation. They mainly take the mission of the basic research and developing innovative talents.

Innovation occupying a very important position in the course of development of human society plays a significant role in promoting human civilization. In 1995 China began to implement the strategy of technology and education, and established the law that technology and education is the core to revive the great country.

Since then, China has gradually begun to increase efforts to university research and training. The development of innovative ability is an important measure to promote the practice of university training model and the innovation of teaching methods.

Supporting and encouraging students to participate the development of science and technology innovation and research as far as possible, and stimulating students initiative, enthusiasm and creativity can improve the scientific quality of students, thus enhancing the students innovative spirit and practical ability.

The analysis of students' innovative capability in practice in China

Innovation is an eternal theme of human development. Development of human society is actually a history of constant discovery and innovation. The so-called innovation is the generation of new knowledge, ideas and the creation of new things, which requires keen insight and creative imagination as well as exploring and inquisitive spirits. As innovation embodies the comprehensive abilities, so the cultivation of innovation is critical for college training.

However, the current situation is that innovation and quality training of university students still have much room to improve.

The Problems of training college students' practice and creative ability

1) Lacking of interest and desire to practice innovation

Innovation development and innovation in the performance are built on innovation interest and desire. However, the college students almost are less interested in innovation. Their interest changes over time, environment and mood.

2) Students curiosity is not strong in itself, having a single knowledge and lacking of innovation.

Innovation is impossible without rich knowledge. Particularly, under the influence of traditional education, the knowledge possessed by our students is mostly ready-made conclusions, just

rote.

3) *The ability to solve practical problems is not strong*

Textbook knowledge learned by college students is ready. Rarely do they get perceptual awareness in the process of their actual hands-on. On one hand, they are not aware of how to do it; on the other hand, they are too lazy to operate it, depending heavily on the ready-made knowledge. Many people may have had innovative ideas but only a small number of people make it in practice. Nowadays the students are subject to examination-oriented education. They are basically still in the stage to learn and accommodate knowledge. The abilities to acquire knowledge and solve practical problems are not strong. Many students showed indifference and panic to the practical problems. For example, they aren't passionate to the practical problems linked to the assessment, but willing to do the examination papers which have a standard answer and so on.

The main reason for poor practice innovation of students

1) *The traditional education system restricts the ability of students to develop innovative practice.*

The traditional education system emphasizes teacher, classroom and textbook as the center, and ignores the training of the individuality of students and the cultivation of creativity. Schools examine the student's learning by tests, and make the students blind pursuit of the test scores, causing loss of interest on the practice of innovation and motivation. The teaching activities are monotony, and limited the students' freedom and practice, as well as unfavorable to students' doubts. All those inhibit innovation and training for students. In the context of "test" education, educational evaluation methods are single and lack of flexibility. The teaching evaluation is results-oriented and neglect of process. Also to some extent, depressing the student's passion for innovation.

2) *The factor that teacher impacts students on innovative and practical abilities.*

On one hand, some college students in China impart knowledge to their main teaching objectives and neglect to guide students in divergent thinking training. "Spoon-feeding" method of teaching is

only to teach the books of ready-made knowledge to the students which fails to mobilize the students' enthusiasm for innovation. and also to contribute to good thinking habits and the elevation of the innovative capabilities. On the other hand, university teachers with low quality affect students on the cultivation of innovative ability. The practice of creative ability to a large extent depends on the level of the quality of university teachers. At present, the ability of our entire faculty to cultivate innovative talents is poor. Although the overall teaching levels of our teachers are very high. However, as teaching under the traditional education system and the "examination-oriented education" mode, the old philosophy of education is still the dominant which can not meet the modern needs of education and training of innovative talents. Even the knowledge of some teachers tends to obsolete, and they can not master the specialized knowledge of cutting-edge. Their teaching methods therefore limited. In short, teachers' functions are focused on the communication of updated knowledge, however, there is wanting for the exploration and creation to the unknown knowledge in the modern education.

3) *The school curriculum is not conducive to the cultivation of the students practice innovation*

The scope of the college professionals is setse too narrow, which fails to attach importance to teaching practice. Although many universities have elective and minor courses, but the task of specialized courses is lack, and students take more emphasis on professional courses and ignore learning of the humanities and social science knowledge and neighboring disciplines, which limits the horizons of students, affecting their ability to produce innovative. Besides, the link between curriculums is not closely enough, resulting in a narrow professional knowledge of students as well as the limitation in the students' ability to innovate.

4) *The investment of the universities training on the students' innovation and practical ability is not enough.*

Favorable environment for innovation is the necessary condition to improve the students practice innovation ability. Students practicing their creative thinking need their schools to invest some money to create good hardware conditions, but few colleges have more financial support for this. And even some students have innovative thinking, but

the absence of good practice conditions, can not get their own ideas to the practice of argumentation, thus making it practical innovation to nothing.

The methods to cultivate the ability of practice and innovation for students

Changing traditional thinking on education and assessment methods

Colleges and universities should begin to train the students of high-level innovative capacity on the following aspects: for instance, making the change both on the concept of the traditional education which is not conducive to innovation and personnel training and the existing course content, teaching methods and training mode; the establishment of the innovative educational concept as well as enlightenment on students to utilize the learned knowledge to analyze and solve problems; and the attention should also be made to both the knowledge and learning when imparting knowledge. Meanwhile, heuristics, seminar-style teaching methods and other feasible means should be employed to stimulate the learning initiative and enthusiasm of student and inspire students to think and innovation, create a democratic, relaxed atmosphere in the classroom, and establish harmonious and equal relationship between teachers and students to cultivate the ability to innovate for students. the assessment on student achievement should be operated in all aspects of practice comprehensively based on the teaching content.

In addition, the traditional classroom teaching attaches importance to imparting existing knowledge, and students usually only by rote in order to successfully pass the exam. Obviously this test is not conducive to the cultivation of students' ability to innovate. So we have to reform the traditional test methods, create a new variety of assessment methods. The new evaluation method not only to examine the students' mastery of knowledge, but also to examine the students' abilities to analyze and solve problems, to develop students awareness of innovation and creativity. Change simply through test scores to assess student performance. Make student test scores, students identify problems in practice, analyze and solve problems, and the practical ability of students included in the evaluation system. Conduct comprehensive assessment and evaluation. Form an objective and fair evaluation of students

Establish scientific and standardized assessment criteria. According to the teaching content, record the

scores separately. Comprehensive assess of student achievements of the practical aspects. Also establish a special incentive fund reward students for outstanding performance in practice innovation. Encourage students to carry out innovation activities by scholarships, awards and other measures.

Build a high-quality teachers team

Cultivating the student' ability to innovate without a high-quality teacher team. Teachers are the dominant in practice teaching, high-level team of teachers is the assurance to improve the practice of teaching quality and teacher plays a vital role in training students practice innovation. Therefore, teachers must establish the correct values, educational concepts, enhance the consciousness of quality education, improve their ideological and professional quality constantly, master modern means of education. Follow the law of education and Individualized. Give students the space to challenge, pay attention to stimulate students' creativity, fully mobilize the enthusiasm of the students, and gradually form innovation.

In teaching, make the teachers change from imparting knowledge to the mentors, emphasis on practice teaching. Attract a large number of outstanding scientific research teachers participate in the practice teaching. Improve teaching team of the practice and improve the level of practice teaching. According to the basic requirements of the curriculum design and syllabus, design the curriculum design and experimental teaching materials, develop multi-functional educational software, and improve the online version of computer simulation software, curriculum design and training software, to meet the educational needs of modern network, and make up for lack of practice.

Build the reasonable curriculum to help students to develop innovative ability

A person's creativity is closely related to whether his knowledge of the structure is reasonable. Innovative thinking not only from the in-depth study of the problem, but also benefited from the solid foundation of knowledge. Having a wealth of knowledge will be good at association and integration, and generate new ideas and form the innovation. Therefore, in order to enable students to obtain a reasonable knowledge structure, professional learning should be placed first. Universities should be in accordance with "Less is more" principle set compulsory classes, refine the basis content of the course, choose the most basic knowledge

which have the intrinsically link to constitutes the knowledge framework which can absorb new knowledge. Ensure students have a more solid foundation of knowledge, based on this and then carry out efforts to increase elective. Break the boundaries of traditional disciplines and professional, adjust the specialty structure, optimizing the curriculum, broaden the professional side and improve the cultural quality of education. Because of the cultural quality can provide broad and deep cultural heritage for culture students' innovative spirit and ability.

Improve the hardware facilities of university innovation in practice

As the insignificance of the hardware conditions of the campus practice innovative, so our colleges should be "quality engineering" as a guide, build experimental teaching demonstration center for the target, deepen the laboratory system, build the laboratory management system of experimental teaching center and form practice teaching security platform in schools. Increase the input to the hardware facilities of training the students' practice innovative capacity, use the modern scientific and technological means, improve the school's teaching facilities and the modernization level of education, thereby enhancing the ability of accessing to knowledge independently through modern means. The development of modern science and technology create a more extensive way to acquire knowledge for students. In addition to traditional textbooks and library books, students can obtain the required information through the internet and other means directly and understand of their profession innovations. Therefore, schools should continue to improve the school's network facilities.

Explore the off-campus practice bases, broadening channels of students' innovative practice.

It should be establish off-campus teaching practice bases to meet the requirements of teaching practice, make the off-campus practice teaching base plans as professional units, play the advantages of university personnel and technology, maintain regular contact with the base unit, so that students can visit the base to practice after class. Broaden the students practice channels so that have the opportunity to practice to verify the theory learned in the classroom.

Create the campus atmosphere to help students develop innovative practice.

The impact of the environment on the human is

subtle. The Formation of the innovation has a very important relationship with environment. The environment and atmosphere, especially the human environment and atmosphere also play an important role in strengthening the innovative capacity of students. Establish the innovation mechanisms of focus on encouragement and tolerance of failures, promote democratic education, create a democratic and free academic environment, construct the university campus environment of the cultural education and enhance the university spirit and the reform and innovation spirit.

The creating of the practical innovation atmosphere provides environmental support for the innovative behavior, and encourage students to produce more creative thinking. Make the encourage innovation fully integrated into the construction of campus culture, promote the spirit of innovation, stimulate the creativity of students, make pioneers, adventurous, brave spirit of the failure of students to become self-consciousness in order to form a new campus culture beneficial to develop students ability to innovate. Actively organize the second classroom activities, combine with professional features stimulate the sense of innovation of the students and expand students' horizons. The major universities can exchange, do scientific research and cooperation. Hold different levels of academic lectures and seminars, and carry out 'innovation and practical ability "as the main content of the essay contest, etc. Through these activities, can make them feel "knowledge is power ', also make them to see their gaps, and thus motivate them to exert themselves.

Develop the students' personality and respect for their interests and hobbies.

Innovation and individuality can not be separated. A good personality in the innovation plays an extremely important role. For a long time, we only focus on training students in common, ignoring the development of individual students. In fact, personality development is the foundation of the comprehensive development. Schools should strive to give students create a personalized knowledge structure of the environment so that they can build knowledge structures according to their characteristics and interests. Develop the potential of students, personality development as the basic starting point. Give the necessary guidance and support to the students' interests and hobbies especially for students with special talents. Provide students with a variety of

different aspirations and means of developing, promote their full development as much as possible, so that each student's personality can be more fully developed.

Conclusion

Students develop their own practice innovation is an important part of quality training. It is the key to access to knowledge and the guarantee of the lifelong learning. Contemporary college students shoulder the glorious mission of socialist modernization. The realization of this mission depends both on the students own efforts, but also depends on whether our colleges and universities have innovative educational ideas, ways and means to develop a high quality and innovative talents. However, cultivating innovation faces many difficulties and problems. For example, there exist many incongruities in the education system, educational structures, training model, educational content and teaching methods. We have an urgent need to promote quality education, and accelerate the pace of innovation and personnel training.

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