

Enhance the Sense of Management and Service in Colleges and Universities to Promote the Cultivation of Top Innovative Talents

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Abstract: The growth of top-notch innovative talents in Colleges and universities will certainly follow the general rule of talent growth. At the same time, innovative talents should also have a special growth path, which can be summarized as personality display, independent accumulation, continuous innovation and responsibility promotion. The discovery, cultivation and management of top-notch innovative talents is a complex social system engineering. The educational administration management department As a key department in the teaching management of colleges and universities, it is necessary to create a loose environment for innovation and entrepreneurship and a series of perfect training mechanisms for top-notch innovative talents. The educational administration department should follow the rules of talent training, formulate a scientific and effective teaching management system, and promote the top-notch innovative talents in Colleges and universities by constantly innovating the educational administration management mode and enhancing the service consciousness of the educational administration department Only through training can we improve the quality of higher education in an all-round way.

"Young talents development plan", one of the 12 major projects in the outline of national medium and long term talent development plan (2010-2020), puts forward the implementation of "experimental plan for training top students in basic disciplines". The outline of the national medium and long term education reform and development plan (2010-2020) puts forward that "efforts should be made to cultivate high-quality specialized talents and top-notch innovative talents with strong belief, good moral character, rich knowledge and excellent ability". The cultivation of top innovative talents in Colleges and universities is not only an important measure to improve education, teaching level and create a high-level university, but also the most important higher education reform measure to build a strong human resources country and an innovative country.

1. The connotation of top innovative talents

Top innovative talents refer to leaders and outstanding talents who have a strong sense of career, a strong sense of social responsibility, innovative spirit and ability, and make significant contributions to national and social development in various fields. Top innovative talents include not only top-notch talents and discipline leaders who have made creative research results in the field of scientific research, but also outstanding talents who have made outstanding achievements in major inventions, creations, innovations in production, technology and other application fields, as well as in operation, management and promotion of social development and progress. As far as this article is concerned, the top innovative talents in Colleges and universities mainly refer to the profound talents with solid professional foundation, broad international vision and strong practical ability.

1.1. Knowledge structure

First of all, top innovative talents should have profound and broad basic theoretical knowledge. Broad basic theoretical knowledge includes not only scientific basic knowledge but also humanistic basic knowledge. Profound and broad basic theoretical knowledge is the basis for the survival and development of top-notch innovative talents, as well as the basis for further expansion of

professional quality and promotion of talent quality. Any innovation is inseparable from extensive knowledge. Only by mastering the basic knowledge, basic theory and basic skills of this discipline and being familiar with the knowledge of other disciplines can top talents innovate and develop sustainably on the basis of comprehensive knowledge structure system.

1.2. Capability structure

For top-notch innovative talents, the ability structure is divided into: the ability to think independently and the spirit of initiative; the profound and broad related comprehensive knowledge, the ability to apply theory to practice and the research perspective of multi-dimensional and innovative thinking; the strong ability to learn and acquire knowledge independently, the skillful method to acquire knowledge and the preliminary identification knowledge; The ability to know and choose knowledge; good communication ability, organization and coordination ability.

1.3. Quality structure

Top innovative talents have a strong sense of career and responsibility. They are determined to pursue their own ideals. They are indomitable, more frustrated and more courageous. They can actively respond to all kinds of sudden changes and setbacks. They have strong psychological endurance. They can deal with all kinds of pressures better. They have strong communication ability, organization and coordination ability. Top innovative talents have excellent psychological quality and high Eq.

The top innovative talents have the quality structure of independent thinking, active exploration, perseverance, high self-control and self-management, team spirit and so on. The spirit of independent thinking and active exploration refers to that thinking and action are not easily influenced by external interference or others, do not believe in authority, do not blindly follow the crowd, and can independently think, independently judge, independently choose and unswervingly innovate in innovation practice. Although the top innovative talents have a high degree of independence, this kind of independence does not mean that they are withdrawn, out of group and enjoying themselves. The spirit of active exploration refers to the psychological quality of having considerable courage, not superstitious to authority, daring to question, daring to take risks, daring to explore and innovate, and daring to take responsibility. Perseverance refers to the psychological quality of perseverance to achieve a certain innovation goal and can withstand numerous failures and setbacks. High self-control and self-management ability refers to the ability to consciously adjust and control their emotions, and the psychological quality of self-regulation, self-restraint, self motivation and self-management. The road of innovation cannot be smooth. In the face of failure, top-notch innovative talents are good at using an optimistic attitude to guide their emotions and learn from the failure. Teamwork spirit refers to the psychological quality of being good at communicating with the team, being considerate of partners, being good at interpersonal communication; teamwork and being tolerant. Knowledge structure, ability structure and quality structure are the necessary qualities for top-notch innovative talents and the basis for them to exert their innovative ability.

2. The growth law of top innovative talents

Many factors will affect the growth of top-notch innovative talents. The growth of top-notch innovative talents is affected by various factors such as internal and external factors, intellectual and non intellectual factors, inheritance and innovation, diligence and methods. Some scholars have put forward eight general laws, such as the teacher's benefit, the best age, and the law of development, the comprehensive benefit, the expected benefit, the symbiotic benefit, the cumulative effect and the Matthew effect. These eight universal laws are the basis for us to formulate general talent education. The cultivation of top-notch innovative talents is different from the cultivation of general talents. The growth of top-notch innovative talents will follow the above-mentioned universal laws. The growth of top-notch innovative talents should also have its special growth path. We summarize it as: personality display, independent accumulation, endless innovation, and responsibility promotion.

2.1. Individuality

Throughout the ages, top innovative talents have different personality characteristics from ordinary people. Top innovative talents have strong innovation motivation, strong innovation interest, strong innovation will, and strong emotional self-control ability in the process of innovation. The personality of top innovative talents is the basis of becoming top innovative talents. "Individuation refers to the unity of individual's internal development, freedom and responsibility, which is the symbol of its full development" ^[1]. Compared with ordinary people, top-notch innovative talents are more intelligent, farsighted, broad-minded and have different insights. To realize the great rejuvenation of the Chinese nation and the realization of the Chinese dream, a large number of innovative and top-notch talents are urgently needed. As a key link of talent training, higher education is a mission to continuously transport top-notch innovative talents for the country.

The personality characteristics of top-notch innovative talents determine that the educational concept of "people-oriented" must be established in talent training. The so-called "people-oriented" is to establish the values of advocating knowledge, respecting talents and yearning for success in Colleges and universities; people-oriented is to emphasize the value discovery of people and the all-round development of talents ^[2]. To establish the people-oriented concept in the education of top-notch innovative talents is to make clear the main position of top-notch innovative talents in the teaching process, respect their distinctive personality, respect their idea of flying in the sky, inspire their enthusiasm for innovation, and encourage them to question, study actively, think independently and explore actively. The educational concept of "people-oriented" is also reflected in the arrangement of education and teaching and the training system of top-notch innovative talents. Colleges and universities should create a loose learning and living environment for top-notch innovative talents as much as possible, provide broad free development space for top-notch innovative talents, and encourage students to dare to choose innovative subjects at the forefront of disciplines for research.

2.2. Autonomous accumulation

Top innovative talents must be familiar with the development process of their major, master professional theoretical knowledge, master innovation skills skillfully, and understand the most cutting-edge research results and development direction of the major. Top innovative talents should not only master the existing knowledge, but also be good at using the existing knowledge to develop innovation. The process of top-notch innovative talents accumulating scientific knowledge independently, consciously improving the realm of humanistic spirit, and internalizing scientific and humanistic knowledge as wisdom of life is also a process of expanding knowledge vision and practicing basic skills.

"Science is to study, understand and master objective things and laws, to act in accordance with objective reality and to act in accordance with objective laws" ^[3]. The desire for scientific knowledge is also the internal driving force for the independent development of top innovative talents. Scientific knowledge is of great importance to the growth of top-notch innovative talents, but the cultivation and edification of humanistic spirit is an important part of the cultivation of top-notch innovative talents. The humanistic spirit is related to the survival of the nation, the rise and fall of the country, the progress of the society and the personality of the top innovative talents. Colleges and universities need to create a strong humanistic atmosphere, a good campus atmosphere of mutual respect, mutual concern and mutual trust between teachers and students, students. In daily teaching, colleges and universities must care for the inner spiritual world of top-notch innovative talents and then improve the spiritual realm of top-notch innovative talents. Top innovative talents not only have true knowledge, but also have true temperament and noble sentiment. Compared with other ordinary students, they have more humanistic spirit and sentiment, more patriotism and social responsibility.

2.3. Endless innovation

The path of innovation cannot be smooth; innovators will encounter all kinds of failures and

blows. In the face of failure, top-notch innovative talents will critically examine and examine their thoughts, behaviors and problems, and learn from them lessons, so that their thoughts, behaviors and problems solved are more in line with rational and objective reality. Therefore, a good reflective ability and a good ability to reflect on the lessons of failure are the necessary qualities of top innovative talents ^[4].

Whether to ask questions is the most important link in the innovation process. When cultivating top innovative talents, colleges and universities should pay special attention to the cultivation of their awareness of putting forward problems, their ability to research and explore problems, and their ability to solve problems through innovation. First, cultivate students' awareness of asking questions. Without raising awareness of problems, innovation will not be carried out. There are not only social science problems, but also pure theoretical problems in natural science, and even frontier problems. Second, train students to master scientific thinking and research methods. Train students to be good at detailed and in-depth analysis of problems, sort out the main contradictions of problems, and think about scientific methods and ways to solve problems, boldly put forward research hypotheses, and carry out rigorous scientific verification. Third, the process of innovation is very difficult. To overcome the difficulties in the process of innovation cannot be separated from the students' deep belief and affirmation of themselves. Whether colleges and universities can stimulate students' self-confidence in cultivating top innovative talents, whether they can cultivate students' strong will, team cooperation consciousness and the innovation spirit of "dare to be the first in the world" are related to the success or failure of talent training.

2.4. Responsibility driven

Human's morality is a kind of regulation and mission that society gives to individual. On the one hand, this sense of responsibility can stimulate people's sense of responsibility for the society and the enduring passion for social innovation, and human morality has a sustained internal driving force for human behavior; on the other hand, responsibility can correct the individual's excessive freedom and laxity. The sense of responsibility helps to shape the order of human mind and establish the order of human society ^[5].

Top innovative talents must have a high sense of responsibility and mission to produce the internal driving force of independent learning and continuous innovation. The consciousness of problems, the courage of competition, the courage of development, the courage of creation, the wisdom of innovation, and the character of responsibility consciousness constitute the quality of the top innovative talents in their growth. Responsibility education is a kind of deep spiritual education, but also an eternal spiritual education. The basic contents of responsibility education include: responsible for oneself, for others, for society, for the country and for human beings. To cultivate the sense of responsibility of top-notch innovative talents, first of all, we should seize the 45 minutes in the classroom, and teachers should permeate the responsibility education into the daily teaching; second, we should create a big environment for the sense of responsibility in Colleges and universities, and cultivate the spirit of students' courage to take responsibility; third, we should encourage students to actively participate in various activities held by the school; fourth, we should respect the main position of students' sense of responsibility, and stimulate them To live up to its inherent needs. Through a good sense of responsibility education, cultivate a sound personality, optimism, tolerance and peace of mind of top innovative talents, and then form a good personality psychological quality conducive to innovative thinking ^[6].

3. The key points of educational administration managers in the training of top innovative talents

3.1. Develop the training plan for top innovative talents

The educational administration office should fully consider the difference between this program and the general professional training program when formulating the top innovative talents training program. The academic affairs office should design the training plan according to the characteristics

of top innovative talents. Therefore, the formulation of top innovative talents training program needs to pay attention to the following three aspects:

3.1.1. Pay attention to the individual development of top innovative students

The traditional training program adopts a unified and non differentiated student management mode, and there is no difference in the training objectives of all students. The cultivation of top-notch innovative talents needs to pay attention to the development of students' huge potential and their personality, so the cultivation plan of top-notch innovative talents must be "different from each other" and "teach students according to their aptitude". The academic affairs office can tailor the talent training plan according to the individual needs and the individual situation of the students. The number and content of courses involved in different training programs are also quite different. The academic affairs office can also encourage students to take secondary or even tertiary degrees. The top innovative talent training program can break the four-year system, set up a more flexible learning system, and allow students to adjust according to the actual progress of learning^[7].

3.1.2. Pay attention to the scientific rationality of building knowledge system

Whether the knowledge system of top innovative talents is reasonable mainly reflects on the curriculum structure. At present, the proportion of compulsory courses is far higher than that of elective courses in general colleges and universities. Students have little chance to choose courses independently, which is not conducive to the overall development of students. Only by reducing the number of required courses and increasing the number of elective courses can the students choose courses according to their own interests and needs. In this way, we can not only respect students' hobbies and meet the requirements of their self-development, but also expand their horizons and cultivate their ability to think from multiple perspectives. In a word, the academic affairs office must change the curriculum structure that is not conducive to the cultivation of top-notch innovative talents, further develop the top-notch innovative talents training program of "thick foundation, wide caliber and strong practice", break the barriers between disciplines, gradually form a comprehensive curriculum system of cultural and scientific penetration and combination of science and engineering, and constantly build a systematic knowledge system necessary for top-notch innovative talents.

3.1.3. Pay attention to the cultivation of students' autonomous learning ability

In terms of teaching method, teachers should change the traditional "cramming" teaching method, which should be supplemented by face-to-face teaching in class, and combine learning in class with self-learning in class. Teachers should ask students to read basic subject textbooks and related reference books after class, especially some original textbooks and the latest foreign research literature. The teacher guides the students to fully discuss the puzzles they encounter in the learning process in class discussion, so as to minimize the time and content of face-to-face teaching. In the training program, colleges and universities must put the strengthening of students' self-study ability in the first place. During the implementation of the training program, the total credits and class hours should be "reduced"; at the same time, colleges and universities should reform the examination system, such as face-to-face teaching, classroom discussion and self-study, which account for 1 / 3 of the total score. For a comprehensive course, many teachers can work together to produce papers and test students' comprehensive application of relevant knowledge.

3.2. "Credit system" for top innovative talents

"Credit system" is a common education mode in Colleges and universities. Colleges and universities can make full use of the credit system lever adjustment mechanism to achieve the goal of top talent training.

3.2.1. Break the boundaries among disciplines, majors, colleges and schools, and create conditions for students to study interdisciplinary and interdisciplinary

Many foreign colleges and universities break the cultural and scientific barriers in the curriculum reform and emphasize general education. For example, in the curriculum reform of Harvard

University, students are required to "complete the learning tasks of two courses in each subject in the fields of humanities, social sciences, life sciences, physical sciences and Engineering" ^[8]. In the process of training top innovative talents, the educational administration department of colleges and universities can use the leverage adjustment mechanism of credit system to break through the barriers of the curriculum of liberal arts and science. Liberal arts students must take a certain number of science and engineering courses before graduation, and the same number of science and engineering students must also take a certain number of liberal arts courses. In this way, we can not only improve the width and breadth of knowledge acquisition of top-notch innovative talents, but also develop their thinking and learning methods. Only by making full use of the credit system to break the boundaries among majors, disciplines, colleges and schools, can it be possible for top innovative talents to study interdisciplinary and interdisciplinary ^[9].

3.2.2. Meet the needs of students' professional and nonprofessional courses

First of all, the school should guarantee the number of core professional courses, as well as the number of professional elective courses, so that students can choose relevant courses according to their own interests and learning needs. Colleges and universities should build a number of high-quality liberal arts and science general courses and scientific research method training courses. Colleges and universities should establish a good long-term mechanism to ensure the long-term stability and high quality of courses.

3.2.3. Give full play to the role of tutorial system

The tutor is the leader of the students in their study. Schools should actively hire teachers with high academic attainments and devotion to their posts to guide students in their professional selection, innovative development direction, etc. this way can help students avoid detours and achieve twice the result with half the effort.

3.3. Service college to create a good environment for talent growth

The professional college is responsible for the training of top innovative talents. The academic administration department shall assist and coordinate with each professional college to solve the difficulties. The educational administration department is responsible for arranging public courses, coordinating public resources, formulating relevant policies, allocating relevant funds to support students' social practice activities, etc., so as to create an environment and atmosphere conducive to the cultivation of top talents.

3.3.1. Select key teachers to teach public courses

The educational administration department shall select key teachers to teach public courses and cultivate all kinds of excellent courses at all levels. Backbone teachers teaching public courses can better guarantee the academic and cutting-edge nature of the course.

3.3.2. Support students to participate in social practice activities

In the process of training top-notch innovative talents, we should not only pay attention to the learning and practice of knowledge in school and in class, but also pay attention to the learning and practice outside school to improve the ability of students to use book knowledge to solve practical problems. The educational administration department should formulate targeted policies to support students to participate in various social practice activities in their spare time and improve their innovation ability and quality ^[10].

3.3.3. Promote exchanges among top innovative talents

Some problems in students' study and life can be solved with the help of parents and tutors, but some problems must be solved by themselves. The educational administration department can organize various kinds of special seminars among and within colleges and universities, guide students to establish social platforms, and help them build bridges of communication and cooperation. The reform of talent training mode will not be accomplished overnight. Colleges and

universities all over the country are actively exploring the training mode of top-notch innovative talents. The educational administration should take the initiative to adapt to the new situation and constantly meet the needs of the development of higher education. The educational administration department, together with other departments and professional colleges of the University, shall do a good job in the cultivation of top innovative talents.

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References

- [1] The report of the International Commission on education in the 21st century to UNESCO: Education - the treasure of wealth [M], Educational Science Press, 1996:199.
- [2] An Huanxiao, Yuan Yuting. The call of knowledge economy for Education -- the development trend of basic education in the 21st century [J], education theory and practice, 2001 (6).
- [3] Yang Shuzi. Green Education: the integration of scientific education and Humanistic Education [J], educational research, 2002 (11).
- [4] Ni Liangkang. Self knowledge and reflection [M]. Beijing: Commercial Press, 2002.
- [5] Wei Jinping. Report on the current situation of social responsibility of college students in China (2018) [R]. Hebei University of technology, 2018.
- [6] Bian Hua: on the cultivation of innovative quality [J], quest, 2004 (2).
- [7] Zhang Lei. Re examination and re reflection on the principle of individualized teaching [J]. Teaching and management, 2018 (24): 98-100.
- [8] Yang Xuexin. Undergraduate curriculum reform of American research universities in the early 21st century [J], Journal of Hebei Normal University: Education Science Edition, 2010 (3): 45-49.
- [9] Zhan Yi, Yu Longjiang, Xie Hongping, Ge Xi, Zhou Shaolin. Research on the construction of top talent training system driven by science and education cooperation [J]. Teaching of China University, 2017 (10): 55.
- [10] Wang Weizu, Xu Dinghua, Zheng Xuming. Research on the reform and practice of top innovative personnel training mode [J]. The road to success, 2017 (4): 1-2.