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The Optimization Path of Innovation Talents' Cultivation Mode in Colleges and Universities in the New Era

Tiansen Liu[1,a], Chenggang Wang[2,b,*], Yue Zhu[2,c]

[1]School of Economics and Management, Harbin Engineering University, Nantong Street, Harbin, China
[2]School of Economics and Business Administration, Heilongjiang University, Xuefu Road, Harbin, China
[a]tiansen0328@harbeu.edu.cn, [b]wangchenggang@hlju.eud.cn, [c]20222082@hlju.edu.cn
[*]Corresponding author: Chenggang Wang

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Abstract: In the context of China's new era, social development has created some new demands for innovative talents. Therefore, it is of great theoretical and practical significance for China's colleges and universities to optimize the extant cultivation mode and thus propose a talent cultivation philosophy that could meet the needs of the new era. To this end, colleges and universities should develop forward-looking explorations from the aspects of optimizing majors' setting, improving the curriculum system, and strengthening digital education. Such meaningful measures will provide reference for China to cultivate high-level talents and build a reasonable talent team.

1. Introduction

At present, China is in a critical period of higher education reforms. The strategy of revitalizing China through science and education, the strategy on developing a quality workforce, and the strategy of innovation driven development are quite important driving forces leading China's high-quality and leapfrog development. The core of innovative talents cultivation is to promote the integration, modernization, sinicization, and internationalization of higher education, lead the new development of natural science and social sciences, and serve the goal of Chinese path to modernization. In recent years, the rapid development of Internet, big data, artificial intelligence, blockchain, and some other emerging technologies has promoted a new round of scientific and technological revolution and industrial revolution, and gradually shaped a new economic system consisting of real economy and online economy, thus providing some new opportunities for innovative talent training, also bringing some new challenges. Therefore, constantly optimizing the cultivation mode of innovative talents is the internal demand and the requirement of the times for the high-quality development of China's higher education under the environment of the new scientific and technological revolution and the industrial revolution. Accordingly, this paper explores how to deepen the supply-side reform of higher education from the perspective of majors' setting, curriculum system, and digital education, in order to increase the effective supply of high-level innovative talents.

2. Literature Review

As early as the 1960s, American colleges and universities began to explore innovative talent cultivation modes. Since then, with the introduction and implementation of a series of national education projects, more and more American colleges and universities have devoted themselves to the design of “One center” and “Three integrations” cultivation modes, i.e. “the student-centered”, “the integration of in class and extracurricular”, “the integration of natural science and social science”, and “the integration of teaching and research” [1]. At the beginning of the 21st century, the United Kingdom and Japan also strengthened the significance of innovative talent cultivation through substantial policy and financial supports, and thus built the cooperation bridge between such talents and R&D activities of industrial sectors, gradually forming more and more high-tech network clusters [2]. Almost at the same time, Chinese colleges and universities also developed some highly fruitful innovative talent cultivation practices, e.g. Peking University, Tsinghua University, Nanjing University, and Wuhan University, with following key arguments. The specific measures developed by Chinese colleges and universities in the process of cultivating innovative talents have been more and more flexible. By constantly optimizing the teaching mode and system guarantee, colleges and universities focused on strengthening students’ innovation capability. At the same time, more and more colleges and universities began to cultivate innovative talents according to the needs of firms, which can help speed up the effective connection between the supply-side and the demand-side of talents [3].

The Chinese government has pointed out that "innovation is the soul of a nation's progress and the inexhaustible driving force for a country's prosperity". In the process of human progress and social development, colleges and universities are the main basis of knowledge innovation, dissemination and application. College page is an important cradle for cultivating innovative spirit and innovative talents[4]. Universities are also part of the national innovation system. The innovation consciousness and innovation ability of contemporary college students have a crucial impact on the future development of the country.

However, looking back at the history of talent training in China, a common weakness among college graduates is the lack of innovation awareness and ability. The main reason for this problem lies in the single structure of knowledge. Although the teaching plan includes dozens of courses, it is basically obtained by the teacher in the classroom through one-way system teaching students. And indirect knowledge here lacks the experience of direct knowledge. At the same time, students lacking critical thinking also accept the teacher's positive thinking mode. As time goes by, a sense is formed that what the teacher says and what the textbook writes is unquestionable. So it's hard to innovate[5].

In addition, strengthening practical education is a very important channel to increase students' experience and accumulation of direct knowledge. Of course, a great deal of indirect knowledge still needs to be passed on by teachers to students. Direct knowledge is derived from the joint research and exploration of teachers and students in teaching, society, scientific research and production. Therefore, the main body of talent training must pay attention to the foundation and pay close attention to the students' basic theory, basic knowledge and basic skills to learn and improve at the same time, practice learning into the education and teaching[6]. Teachers should also encourage students to improve their ability to master and use knowledge in practical education, give full play to relevant creative talents and take this as a new breakthrough to further deepen the reform of education and teaching.

Like practical education thought, innovative education thought is also an important part of modern education thought. Innovation and practice are the general trend of education in the new era, the main melody of education in the new era, and the distinctive features of education in the new

era. The cultivation of innovative spirit and practical ability is the core content of vigorously promoting quality education and improving students' comprehensive quality. To strengthen the cultivation of innovative thinking and creative ability in practical education, we need to adhere to several principles:

First, the principle of individuation. Teachers should position their role as facilitators. Teachers should teach students according to their aptitude in education and teaching, and help students master knowledge actively, actively and consciously according to the objective laws of the learning process, rather than forcing students to walk.

Second, the principle of autonomy. Form a democratic and equal relationship between teachers and students. Teachers should encourage students to give full play to their subjective initiative. Students should really understand what they have learned and be good at applying it in practice. Students should learn basic skills to improve their ability to analyze and solve problems.

Third, the exploratory principle. The subject of education should actively create an exploration situation for students and put forward exploratory questions, so as to inspire students to explore scientific conclusions and develop the spirit of exploration in their own experience.

Fourth, the principle of openness. That is, all educational activities are open to teachers and students. Education should also be open to modern society, and open to the latest educational theories and successful educational experience at home and abroad. Only in this way can educational resources achieve the optimal allocation. So that education and teaching activities become more active and healthy[7].

However, as the Chinese government has introduced a series of major development strategies, i.e. the 14th Five-Year Plan and the New Development Paradigm, the demand structure for innovative talents has changed a lot. Some educational concepts, cultivation modes, and cultivation approaches have not met the needs of the new era. Under such demands, Chinese colleges and universities need to comprehensively improve the quality of teachers and students, focus on building a talent cultivation mode that meets the needs of national and industrial development, and give a full play to the fundamental and leading roles of higher education.

3. Theoretical Guidance for the Innovative Talents Cultivation in Colleges and Universities in the New Era

3.1. The Inevitable Requirement of China’s Governance and China’s Practice

At present, China’s social and economic spheres are sustainably generating the new phenomena, new patterns, and new achievements. Such positive situations require comprehensively promoting the connotative development of China’s higher education, constantly enhancing the autonomy and innovation of majors’ construction and talents cultivation, using advanced theories rooted in China’s situation to well tell China’s stories. Therefore, the cultivation of innovative talents is an inevitable requirement in response to China’s governance and China’s practice.

3.2. The Route One Must Take to Promote China into a Powerful Country in Higher Education

The cultivation of innovative talents is proposed and developed under the background of revitalizing higher education in China, and is the strategic deployment of building a “quality China” of higher education in the new era as well. Therefore, the precise planning of innovative talent cultivation program is the response of colleges and universities to the times of building a strong country in higher education and cultivating talents for national rejuvenation, also a strong support for promoting the connotative development of each college and university.

3.3. The Mission of Building the Majors and Disciplines Systems with Chinese Characteristics

At present, colleges and universities in China also need to accelerate the construction of majors and disciplines systems with Chinese characteristics, in order to make our Chinese voice on the world's higher education platform. The new majors and disciplines system needs to show Chinese characteristics in terms of target orientations, theoretical visions, and resources allocations. This process requires innovative talents to assume new responsibilities and missions.

4. The optimization path of innovative talents' cultivation mode in colleges and universities

4.1. Optimizing majors' setting

China's colleges and universities need to rely on their own innovative talent cultivation goals, proactively develop new majors and upgrade traditional majors. First of all, colleges and universities should focus on the emerging new needs in the sphere of social development, establish a cross-integrated curriculum system including natural science and social science, particularly how to cultivate high-quality innovative talents in the digital economy environment. Second, colleges and universities need to improve and upgrade traditional majors based on interdisciplinary integration. For this reason, colleges and universities should integrate the hotspot factors in the current social and economic spheres into the curriculum construction reasonably, and constantly improve the internationalization level of the curriculum in the face of talent innovation capability. In this process, efforts should be made to create distinctive cultivation mods for micro majors, experimental classes, innovative classes, etc.

4.2. Improving the curriculum system

It is necessary for colleges and universities to concentrate on the emerging cross direction, in order to reconstruct the curriculum system and consolidate the new philosophy of curriculum construction in the context of digital economy. First of all, colleges and universities need to build a characteristic curriculum system that reflects their own characteristics. For emerging cross disciplines, it is necessary to carefully design general education courses, core courses, elective courses, experimental courses, etc. At the same time, they should promote new teaching modes based on the "Internet plus", AI technology, and big data visualization technology, in order to cultivate innovative talents' cross domain knowledge integration capability and practical capability. Second, colleges and universities need to strengthen ideological and political education in the teaching process. By teaching typical courses of ideological and political cases, it should combine heuristic, research-and-discussion, situational, and other methods. Furthermore, through group discussion, experience sharing, and other effective ways, the classroom atmosphere integrating "temperature, heat, and height" has been shaped, and the organic unity of value shaping, knowledge teaching, and capability cultivation has been truly realized as well.

4.3. Strengthening digital education

In the age of big data, digital technology has changed the way people communicate. It makes information fragmented and consumers' contacts fission. Therefore, higher education with communication as an important way would also rely more on digital technology and artificial intelligence. To this end, colleges and universities should develop the following reforms: (1) Optimizing the content of courses guided by the needs of the industry; (2) Organizing practical training with students' innovation capability as the focus; (3) With the industry university

cooperation as a link, promoting the benign supply and demand of talents. Through digital education, students' autonomous learning capability and lifelong learning awareness will be cultivated, which will lay a foundation for further study and work in relevant spheres in the future, and thus promote students' growth and success.

5. Conclusions

This paper explores the optimization path of innovative talents training in China's colleges and universities in the new era. For quite a long time in the future, colleges and universities need to explore the optimization path from multiple dimensions and perspectives, and regard the effective combination of talent supply and demand as an important evaluation standard for the effectiveness of innovative talent cultivation. Overall, optimizing majors' setting, improving the curriculum system, and strengthening digital education are very important ways to cultivate innovative talents for China's colleges and universities, and such works require a systematic and deep thinking.

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