

Management of Higher Education and Teaching Based on the Cultivation of Innovation Ability

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Abstract: Innovation ability has become an important indicator of talent quality, and cultivating high-quality talents with innovative spirit and ability is an important mission of higher education. In the face of the implementation of the national innovation driven development strategy and the urgent demand for innovative talents in society, universities must focus on cultivating innovative abilities as a key point of talent cultivation, deepen education and teaching management reform, take targeted measures from educational concepts, training models, teaching staff, evaluation systems, etc., comprehensively enhance talent innovation capabilities, and continuously supply excellent innovative talents for the modernization construction of the country.

Keywords: higher education, innovation ability, talent cultivation, education and teaching management

Introduction

Innovation is an inexhaustible driving force for a country's prosperity and development. As an important combination of technology as the primary productive force and talent as the primary resource, universities shoulder the important mission of cultivating innovative talents. Faced with the implementation of the national innovation driven development strategy and the urgent demand for innovative talents in society, the cultivation of innovation ability has become the core task of talent cultivation in universities. Higher education institutions must comply with the requirements of the times, adhere to the path of connotative development, take the cultivation of innovative ability as the logical starting point and foothold of educational and teaching reform, accelerate the construction of an innovative talent training system, continuously innovate talent training models, and provide strong talent support for the construction of an innovative country.

1. The importance of cultivating innovative abilities in college talents

1.1 Innovative talents are an urgent need for the development of the country and society

Against the backdrop of a new round of global technological revolution and accelerated industrial transformation, countries are engaged in a new round of strategic games around technological innovation, and innovation capability has become a key element of a country's core competitiveness. China is currently in a critical period of innovative development, and building an innovative country and achieving high-quality development have become the trend of the times. The demand for innovative talents in socio-economic development is more urgent, not only requiring high-level scientists, engineers, and highly skilled talents, but also a large number of high-quality specialized talents with innovative consciousness and ability. As the main battlefield for cultivating innovative talents, universities must shoulder heavy responsibilities, take cultivating innovative talents as their own responsibility, further revise the positioning of talent

cultivation goals, optimize the layout of professional disciplines and curriculum system, innovate talent cultivation models, improve the quality of innovative talent cultivation, and provide strong talent support for national and social development^[1].

1.2 The cultivation of innovative ability is an inevitable requirement of higher education reform

The cultivation of innovative ability is an inevitable requirement for the development of higher education connotation and the improvement of talent cultivation quality. At present, there are still problems in China's higher education, such as a disconnect between talent cultivation and the needs of economic and social development, weak innovation and entrepreneurship education, and weak practical abilities. The talents cultivated have insufficient innovation capabilities and are difficult to adapt to the needs of economic and social development. Therefore, higher education must establish the concept of innovative development, deepen educational and teaching reforms, regard the cultivation of innovative abilities as the core task of talent cultivation, optimize talent cultivation plans, innovate curriculum teaching content and methods, strengthen practical teaching links, improve the innovation and entrepreneurship education system, take multiple measures to improve the quality of talent cultivation, and cultivate a large number of high-quality innovative talents. Only in this way can higher education better serve the national innovation driven development strategy and the needs of economic and social development.

1.3 Innovative talents can help alleviate current employment pressure

The employment issue of college students is related to the quality of higher education and teaching, economic development, and social stability. At present, the employment situation for college students remains severe, with prominent structural contradictions and insufficient innovation ability being one of the important reasons. College students generally have problems such as weak hands-on ability, insufficient innovation awareness, and weak entrepreneurial ability, making it difficult for them to meet the requirements of employers for high-quality innovative talents. Therefore, universities must strengthen innovation and entrepreneurship education, focus on cultivating students' innovative consciousness, innovative thinking, and innovative ability, guide students to establish entrepreneurial consciousness, master entrepreneurial knowledge and skills, and improve students' employment and entrepreneurship ability. Innovation and entrepreneurship education is an important breakthrough in solving the employment problem of college students, which is of great significance for alleviating employment pressure and achieving higher quality and more comprehensive employment for college graduates^[2].

2. The main problems in the current cultivation of innovative talents in universities

2.1 Relatively outdated educational concepts and weak innovation awareness

Influenced by the exam oriented education ideology and traditional talent cultivation concepts, some universities do not attach enough importance to the cultivation of innovative abilities. In terms of educational philosophy, training goal positioning, and teaching process, there is still a tendency to focus on knowledge transmission and neglect ability cultivation, which makes it difficult to meet the requirements for the growth and development of innovative talents. Some teachers are satisfied with simply following the textbook, lacking innovation and teaching methods. They rarely encourage students to engage in creative thinking and practice, and even believe that doing so will affect teaching progress and order. At the same time, influenced by social employment standards and employment concepts, some students have insufficient understanding of the cultivation of innovation ability, and have a mentality of unwillingness and reluctance to innovate, with low initiative and enthusiasm for innovation. Universities must strengthen the promotion and education of innovative educational concepts, help teachers and students correct their understanding, and establish innovative consciousness.

2.2 The talent cultivation mode is single, and the practical link is weak

At present, the cultivation of talents in universities is still mainly based on traditional disciplinary and professional

education, with a small proportion of general education and insufficient interdisciplinary training. The talent cultivation mode is relatively single, making it difficult to cultivate students' innovative consciousness and interdisciplinary innovation ability. At the same time, there is a widespread phenomenon of emphasizing theory over practice and classroom over experiment in the process of talent cultivation. The proportion of practical teaching is low, the content of practical teaching is outdated, the form is single, and it is disconnected from theoretical knowledge, making it difficult to cultivate and exercise students' innovative practical abilities. In addition, there is a disconnect between innovation and entrepreneurship education and professional education, with a common phenomenon of "two skins", lacking systematicity, sustainability, and weak effectiveness. The reason for these problems is that universities have insufficient understanding of the laws of talent cultivation, insufficient investment in talent cultivation mode reform and innovative practice platform construction, and lack institutional guarantees^[3].

2.3 The teaching staff needs to be strengthened, and teaching methods urgently need to be innovated

At present, there is a widespread problem of low proportion of "dual qualified" teachers and insufficient teaching staff for innovation and entrepreneurship education in universities, which affects the quality of innovative talent cultivation. Some teachers have strong professional knowledge and abilities, but lack innovation awareness and ability. They have insufficient work experience and practical experience in the front line of enterprises, and their teaching content is detached from practical production, making it difficult to effectively guide students in innovative practice. At the same time, influenced by traditional teaching concepts and evaluation methods, many teachers adopt a "cramming" teaching style, rarely using heuristic, exploratory, participatory and other teaching methods, which makes it difficult to mobilize students' initiative and creativity in learning, and is not conducive to the cultivation of students' innovative abilities. In addition, universities mainly value teachers' research performance in their evaluations, and lack sufficient incentives for teaching innovation, resulting in a common phenomenon where some teachers prioritize research over teaching.

2.4 The evaluation system is not sound, and the incentive mechanism needs to be improved

A scientifically reasonable evaluation system is an important guarantee for cultivating innovative talents. At present, the evaluation system for talent cultivation in universities is not yet sound. The evaluation criteria focus more on knowledge assessment and lack ability assessment, emphasizing results over process, and emphasizing explicit over implicit, making it difficult to objectively and comprehensively evaluate students' innovation ability. At the same time, employers tend to prioritize education and scores in talent selection, which is not conducive to cultivating students' innovative consciousness and ability. In addition, the incentive mechanism for universities to cultivate innovative talents is not sound. Insufficient attention and rewards are given to teachers who guide students in innovative practice and achieve innovative results; The lack of targeted recognition and reward measures for outstanding students in innovative practice is not conducive to the emergence of innovative talents. A sound evaluation and incentive mechanism for innovative talents can help optimize the educational environment and stimulate the enthusiasm of teachers and students to participate in innovation.

3. Main measures for the reform of higher education and teaching management

3.1 Strengthening organizational leadership to improve management systems and mechanisms

The cultivation of innovative talents is a complex systematic project that requires high attention from university leaders. A leading group for the cultivation of innovative talents, led by the main leaders, should be established to coordinate planning, organization, and implementation. We need to establish a sound two-level management system between schools and colleges, strengthen communication and coordination among departments such as academic affairs, student affairs, scientific research, personnel, and youth league committees, and form a working force. We should

incorporate the cultivation of innovative talents into the school's development plan and talent team construction plan, closely integrate it with subject and major construction, curriculum construction, teaching condition construction, and faculty team construction, and promote it in a coordinated manner. At the same time, universities should also formulate relevant policies, clarify the work objectives, implementation plans, guarantee measures, and division of responsibilities for cultivating innovative talents, establish and improve a long-term mechanism for cultivating innovative talents, and ensure the solid and effective implementation of talent cultivation work^[4].

3.2 Increasing funding investment to improve teaching conditions and guarantee

Universities should include funds for cultivating innovative talents in their budgets, increase investment in teaching conditions such as innovation laboratories, innovation practice bases, and maker spaces, and provide guarantees for teachers and students' innovation practice activities. To integrate various educational and teaching resources, strengthen cooperation between departments and disciplines, and promote the co construction and sharing of experimental and practical teaching platforms. We should guide and encourage various forces such as enterprises and society to participate in the cultivation of innovative talents in universities, and establish a diversified and sustainable investment mechanism. At the same time, it is necessary to establish and improve the operation and management system of practical teaching, perfect the management of innovative practice projects, the recognition of practical credits, and the reward of innovative achievements, and other supporting policies to ensure that innovative practice activities are carried out in a solid and orderly manner.

3.3 Deepening teaching reform to promote curriculum system innovation

Universities should integrate the cultivation of innovation ability into the entire process of talent cultivation and deepen the comprehensive reform of education and teaching. We need to optimize the talent cultivation plan, promote the close integration of general education and professional education, theoretical teaching and practical teaching, and first classroom and second classroom. We need to strengthen the organic integration of innovation and entrepreneurship education with professional education, and integrate innovation and entrepreneurship education throughout the entire process of talent cultivation. To build a multi-level, three-dimensional, and comprehensive innovative practice curriculum system, increase the proportion of innovative practice teaching, and develop new practical teaching models such as research-based, project-based, and case-based. We need to strengthen the construction of ideological and political education in the curriculum, integrate Marxist positions, viewpoints, and methods throughout the entire teaching process, and help students establish correct innovative values. At the same time, universities should encourage teachers to actively carry out teaching research and reform practices, explore heuristic, discussion based, participatory and other teaching methods, promote teacher-student interaction and communication, and stimulate students' innovative inspiration.

3.4 Strengthening the monitoring and evaluation feedback mechanism of teaching quality

The cultivation of innovative talents is a continuous improvement process, which requires the establishment and improvement of teaching quality monitoring and evaluation mechanisms to promote the continuous improvement of talent cultivation work. Universities should strengthen the process management and quality monitoring of innovative talent cultivation, regularly carry out teaching supervision, peer review, student evaluation and other work, and timely discover and solve problems in teaching. To establish a talent cultivation evaluation system guided by innovation ability, improve student academic evaluation standards, and make innovation ability an important assessment content. We need to explore new models of teaching evaluation such as third-party evaluation, regularly collect and analyze data on talent cultivation status, and scientifically evaluate the effectiveness of innovative talent cultivation. At the same time, it is necessary to improve the feedback mechanism for evaluating the quality of talent cultivation, timely feedback the evaluation results to relevant departments and teachers, adjust and optimize talent cultivation plans and teaching methods in a targeted manner, and promote continuous improvement of innovative talent cultivation work.

4. Conclusion

Cultivating innovative talents is the core task of higher education, which requires universities to coordinate and promote educational and teaching management reforms, and systematically build an innovative talent training system. Universities should effectively strengthen organizational leadership, improve institutional mechanisms, increase investment in educational resources, deepen the reform of talent training models, promote curriculum and teaching innovation, strengthen innovative practical teaching, improve the evaluation system for innovative talent cultivation, and form a "full-staff, whole-process, and all-round" pattern for innovative talent cultivation. At the same time, universities should actively connect with the needs of economic and social development, strengthen cooperation with local governments and industry enterprises, continuously expand collaborative education channels, and focus on improving the pertinence and adaptability of talent cultivation. Only by continuously deepening educational and teaching reforms, accelerating the construction of an innovative talent training system with Chinese characteristics and world-class standards, can universities continuously improve the quality of talent training and provide solid talent support for accelerating the construction of an innovative country and comprehensively building a socialist modernized strong country.

Conflicts of interest

The author declares no conflicts of interest regarding the publication of this paper.

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