Adult and Higher Education (2024)
Clausius Scientific Press, Canada

DOI: 10.23977/aduhe.2024.060619
ISSN 2523-5826 Vol. 6 Num. 6

The realistic dilemma and innovation path of training top innovative talents of graduate students

Guo Guangshuai

School of Economics and Management, Guizhou Normal University, Guiyang, Guizhou Province, China

Keywords: Graduate education; Top innovative talents; Personnel training mode; Integration of production and education

Abstract: Graduate education is crucial for China's scientific progress, yet it faces challenges such as a singular talent training model and limited innovation abilities. To address these, we must reform the training model to integrate industry, academia, and research, enhance students' innovative skills, foster a collaborative research community, and reform educational evaluations to create a more scientific educational environment.

It is the core content of China's strategy to build a strong education country that is committed to doing a good job in postgraduate education that meets people's expectations. This move is not only related to the rapid development of the national education cause, but also the key to promoting the strategic goal of strengthening talent and science and technology. As the main position to shape high-level professionals, graduate education has a vital impact on enhancing the competitiveness of the country in the international arena and helping the overall progress of society. It is not only related to the improvement of national innovation capacity, but also an important force to promote social development. In recent years, with the gradual expansion of graduate enrollment, the cultivation of top-notch innovative talents is facing many challenges. These challenges are especially prominent in four core aspects: training mode, innovation ability improvement, scientific research activities promotion and education evaluation system improvement. In the face of these challenges, it is necessary to maintain a high attitude and actively explore practical coping strategies.

1. The Realistic Dilemma of Cultivating Postgraduates' Top Innovative Talents

1.1 A single talent training model

The talent training model of graduate education has a significant tendency to be single [1][2][3]. Under the current education system, the traditional way of graduate training shows the characteristics of high solidification and standardization. Although this model helps to maintain the standardization and systematization of education, it also obviously ignores the individual differences among students and the diversified development needs, thus giving rise to a series of problems that need to be solved.

The single training mode restricts students within theoretical frameworks, hindering practical

application and innovation. It also overlooks the need for interdisciplinary research and innovative thinking, which are crucial for graduate development. This limitation on students' exposure to other fields hampers the creation of innovative, interdisciplinary research. Furthermore, the lack of diversity in education can lead to poor learning outcomes and negatively impact the quality and reputation of graduate education. To address these issues, it's essential to explore diverse training models that cater to students' comprehensive development and allow for personalized teaching strategies, thereby enhancing the overall quality and international competitiveness of education.

1.2 Modular innovation ability training methods

Graduate education is facing the challenge of lack of innovation ability, which is mainly due to the limited educational resources, the limited quantity and quality of scientific research topics, the excessive theoretical teaching and the neglect of practical operation and heuristic teaching[4]. The backward curriculum, the lack of practical courses and the disconnection between theory and practice have weakened the cultivation of scientific research interest and innovation ability[5]. Some postgraduates lack the ability to innovate and solve problems, and traditional educational concepts pay too much attention to theoretical learning and neglect practical ability [6]. Insufficient number of tutors, too many students to guide, limited project resources and limited energy input all pose challenges to the cultivation of innovation ability. The low participation in research practice, the shortage of funds, the scarcity of academic exchange opportunities, the limited academic vision and the lack of innovative research teams all affect the research participation of graduate students. The excessive pressure of indexing leads to the postgraduates' eagerness for quick success, simple knowledge structure and weak practical ability. Tutors play a key role in graduate training, but their lack of academic level and innovation ability, as well as the lack of responsibility consciousness and the lack of scientific research projects and financial support, seriously restrict the cultivation and development of graduate innovation ability.

1.3 The form of scientific research activities under siege

Research is the key to higher education and vital to national development. Improving the innovation ability of graduate students is a necessary step to train top talents. However, the expansion of graduate enrollment has led to challenges to social capital and academic support, such as higher enrollment thresholds, uneven guidance from tutors and a single research system, which have led to a scarcity of original results, forming a "siege" phenomenon of research participation. Addressing these issues is critical to the quality and sustainability of graduate education[7].

Graduate students face challenges in scientific research literacy and unclear academic achievement expectations, resulting in poor practical and innovative skills. Limited participation in research activities weakens critical thinking and innovation, and diminishes the research environment. The growing number of graduate students dilutes the guidance from supervisors and increases their workload, leading to a predicament of independent research[8]. The scarcity of publishing opportunities hinders knowledge exchange and contributes to the trend of publishing in lower-quality outlets, creating "academic internal friction." As academic standards rise, the pressure to publish intensifies, causing students to struggle between short-term results and long-term quality research. Additionally, the limited and uneven distribution of academic resources exacerbate the difficulty in training top innovative talents.

1.4 An educational evaluation system for prisoners

The reform of educational evaluation plays an important role in promoting the improvement of

graduate students' innovative ability, the modernization of higher education and the construction of graduate education evaluation system in line with China's national conditions. However, in view of the system differences, the diversity of subjects, the diversity of values and the complexity of evaluation methods, the reform of educational evaluation is bound to face many challenges and difficulties. [9].The prisoner's dilemma in educational evaluation reform arises as reformers adopt utilitarian attitudes for personal gain or fear of authority, focusing on superiors' concerns rather than the reformers' interests, thus neglecting deep-seated problems. Graduate education evaluation overemphasizes paper quantity, journal rankings, and research projects, losing sight of the true goal of scientific research. This leads students to prioritize publishing many papers quickly, straying from the essence of research. Moreover, there's a clear trend of "centrifugation" in the pursuit of international standards, which, while aiming to enhance the domestic system's scientificity and effectiveness, often results in mere imitation of international standards without considering their adaptability. This excessive "internationalization" may cause reform to deviate from its intended direction, producing negative outcomes. The simplistic approach to evaluation weakens the relevance and impact of reforms. Given the significant differences among countries in culture, education systems, and development levels, educational evaluation reforms should take into account the national context. Blindly adopting international standards without considering domestic characteristics can hinder the effective resolution of local issues, thereby affecting the reform's effectiveness and outcomes.

2. Innovative Paths for Cultivating Graduate Students' Top Innovative Talents

2.1 Integration of industry and education

Graduate education focuses on developing high-quality, innovative talents. To meet this objective, we need to pursue an independent training model emphasizing the integration of industry and education. This strategy aims to enhance graduate innovation, align professional and disciplinary degrees, and foster a close relationship between education, talent, industry, and innovation. A "diversity to single" cooperation model is proposed to share resources and improve education quality. Graduate programs should be industry-focused, project-based, and interdisciplinary, enhancing students' practical and innovative skills. This approach boosts employment competitiveness and the development of high-quality talent. To cultivate top innovative talents, we must refine talent training, deepen industry-education integration, and reform the curriculum system fundamentally. Educational institutions, businesses, and industries should collaborate to advance graduate education.

2.2 Systematization of innovation capacity

The improvement of innovation ability depends on the common progress of thinking, consciousness and ability. The theory of skill operation emphasizes that the improvement of skills requires individual initiative and practice. First of all, it is necessary to strengthen the cultivation of innovation consciousness, which requires the joint efforts of schools, mentors and students. Colleges and universities should set up interdisciplinary courses to increase the breadth and depth of knowledge, and strengthen the application ability through practical courses [9]. Secondly, colleges and universities should strictly select tutors, pay attention to their academic level and ethics, optimize their teaching and research work, break the lifetime appointment system, regularly train and evaluate tutors, and implement the double selection system of teachers and students. Finally, universities should establish scientific research and innovation bases, support interdisciplinary research, promote resource sharing, build an environment and management system conducive to

innovation, strengthen the management and supervision of academic disserations, and ensure their academic value and originality.

2.3 Synergy of scientific research activities

Postgraduate education is the core of cultivating innovative talents, so it is necessary to build an innovative community of teachers and students and emphasize the leading role of tutors. Innovative education is crucial to the cultivation of scientific and technological talents, especially graduate students, who have a major mission of scientific and technological self-reliance . Therefore, it is crucial to provide practical innovation platforms that enable students to apply theory to practice, combining scientific research results with national needs. Postgraduate education should explore the effective path of integrating innovative education into disciplines, and realize the close combination of policies, people's livelihood needs and scientific and technological development.

First, school builds an innovation community based on policies, encourage teachers to participate in major scientific and technological projects, and reward those who show results. At the same time, young students are supported to participate in projects to stimulate their innovation potential. Secondly, school should pay attention to the aggregation of teachers, make use of superior discipline resources, set up an innovative education teacher team, select top talents to conduct original research, and cultivate scientific research and innovation ability. School introduces scientists and entrepreneurs to participate in talent training, jointly develop plans, and cooperate to guide students. School establishes an innovative education platform, provide a stage for practice and innovation, and stimulate students' interest in innovation. Graduate education should establish more platforms, promote the integration of industry, university and research, and strengthen social ties. Finally, we need to create an innovative atmosphere, provide growth space and resources, guide students to carry out scientific research and innovation activities, explore innovative education methods, and provide students with free exploration space. Through these efforts, graduate education can provide young students with more opportunities and resources for innovation, and help them become a force for technological self-reliance.

2.4 Ecological evaluation of education

Education, as an important cornerstone of socialist modernization, is the only way to achieve the great rejuvenation of the Chinese nation. Its prosperity and progress are not limited to the comprehensive strengthening of basic education, higher education and lifelong education, but more importantly, the significant enhancement of its leading role, the continuous optimization of the educational process and the fruitful educational results. Such comprehensive promotion and development not only provides a solid talent guarantee and intellectual support for the modernization of the country, but also lays a solid foundation for the great rejuvenation of the Chinese nation. All aspects of education are positively guided and driven by educational evaluation. In view of this, we must devote ourselves to cultivating outstanding graduate students with innovative ability with rigorous attitude and all-out determination. At the same time, the reform of the educational evaluation system also needs to be further promoted in order to build a more scientific and reasonable education environment. This has a solid and important supporting role for the promotion of China's education power construction.

We should reform graduate education to meet domestic and international standards and social needs, focusing on cultivating innovative talents to support national development. Teaching evaluations should prioritize original innovation and technological self-reliance, establishing a system that promotes scientific and theoretical innovation. Graduate education should be practical, breaking from Western academic constraints, and align with China's higher education laws to build

a socialist evaluation system. This will enhance the development of top-tier universities and innovative talent training, strengthening China's voice in global higher education.

3. Conclusion

Cultivating postgraduate top-notch innovative talents needs to meet the challenges and seek synergies in the innovation ecosystem. Educational model reform is the key, attaching importance to students' quality improvement and interdisciplinary skills training, and adopting diversified teaching to stimulate potential. The integration of industry and education is the core, and cooperative enterprises provide students with practice opportunities, enhance market understanding, promote resource sharing and achieve win-win results. Strengthening the cultivation of innovation ability, encouraging students to participate in competitions and entrepreneurship, providing practical platforms, and cultivating innovative thinking and skills, we need to establish a scientific research community to promote exchanges between teachers and students, promote academic research, enhance teachers' scientific research and teaching ability, and cultivate students' scientific research literacy and innovative spirit.

References

[1] Moore J. F. Predators and prey:a new ecology of competition[J].Harvard Business Review, 1993,71(3):75-86.

[2] Ji Guoju, Xu Zhengwei, Wu Lichun. Ideas and measures to improve the innovation ability of graduate students in China: from the perspective of University culture [J]. Jianghuai Forum, 2015(06):188-192.

[3] Shen Wenqin. Changes and Countermeasures: Research on Independent cultivation of top innovative talents for graduate students under the new situation of overseas study [J]. Chinese Higher Education Research, 2024(04):85-92.

[4] Yang Chao. High-quality Development of Professional degree postgraduate Education: Connotation, Logic and Practice Path [J]. Graduate Education Research, 2023(04):56-63.

[5] Guo Guangsheng, Wu Xiaohua. Building a high-quality graduate education system to comprehensively improve the quality of Independent talent training: The concept and practice of graduate education in Minzu University of China [J]. Degree and Graduate Education, 2023(11):1-8.

[6] Huang Fei, Liu Xin-Bao, Wu Hong-Bin, et al. Exploration and practice of Training mode of practical innovation ability for professional degree postgraduates [J]. Academic Degree and Graduate Education, 2024(04):23-29. (in Chinese)

[7] CAI Fen, Gao Yao, Wang Xia. Promotion or hindrance: The relationship between person-environment matching and doctoral students' academic innovation ability [J]. Chinese Higher Education Research, 2024(02):78-85.

[8] Zhu H W. How knowledge Sharing affects the development of academic doctoral students' research innovation ability: A chain mediation analysis based on learning engagement and research efficacy [J]. Chinese Higher Education Research, 2024(02):86-93.

[9] Liang Chuanjie. The development mode of postgraduate education: connotation, characteristics, pattern analysis and transformation path [J/OL]. Graduate education research, 2024 (3): 21-26 + 53 [2024-06-04].