

# Innovating Graduate Education Models in the Context of the New Era: Construction and Implementation Strategies

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**Abstract:** As China enters a new era, the reform of postgraduate education has become increasingly significant. The postgraduate training mode is now a key component in building innovative talent cultivation mechanisms in Chinese universities. In response to evolving educational trends, it is imperative to develop new postgraduate education models that align with international standards and support China's economic and social progress. This requires implementing forward-looking concepts, reform mechanisms, flexible environments, and robust safeguard mechanisms. Despite these needs, the current postgraduate education system faces numerous challenges. This paper proposes an innovative postgraduate education model and corresponding implementation strategies, aimed at addressing these challenges. By conducting a thorough analysis of existing issues and applying novel theoretical frameworks, the research emphasizes the importance of comprehensive reforms. The proposed model seeks to improve the quality of postgraduate education, and aims to enhance its global competitiveness. The study's findings have significant theoretical and practical implications, offering valuable insights into the revitalization of China's postgraduate education system. This comprehensive approach is expected to foster a more effective and internationally competitive postgraduate education framework, contributing to the broader development of China's economy and society.

**Keywords:** Postgraduate Education Reform; Innovative Training Models; Innovative Training Models; Talent Cultivation Mechanisms; Theoretical and Practical Implications

## 1. Introduction

Since the beginning of the 21st century, with the accelerated development of global economic integration, international competition has become increasingly fierce. China is at a critical stage of transformation and upgrading, urgently requiring a large number of highly qualified talents with practical skills and innovative abilities. Facing the global competitiveness, graduate education has gradually become an indispensable force promoting the rapid development of the Chinese economy [1]. To enhance its international competitiveness, China must possess a substantial number of highly innovative talents. It has explicitly emphasized the need to strengthen the development of fundamental disciplines, emerging disciplines, and interdisciplinary studies, and to build world-class universities, providing guidance for the development of higher education in the new era. The key to the "Double First-Class" initiative lies in the cultivation of high-level talents, and the quality of high-level talent cultivation is directly related to the development of society as a whole. However, under the current social context, the traditional graduate training model has revealed a series of problems, including a mismatch between supply and demand, a singular approach to talent evaluation, and a decline in talent quality, all of which urgently need to be addressed and adjusted. In the context of the new era, exploring innovative training models for "academic" and "professional" graduate students is crucial for rapidly enhancing the quality of graduate education in China, aligning with the country's goal of building an innovative nation and world-class universities [2]. To adapt the graduate training model to the development of Chinese society, it is necessary to conduct an in-depth study of the current training models and analyze and summarize the existing evaluation status and issues. This

will allow for the proposal of new ideas for graduate training models that align with the development patterns of Chinese society and the new era, which is of great significance in meeting practical demands. Therefore, this study employs a comparative analysis method, taking into account the current background of the new era, to thoroughly analyze and discuss the existing graduate training models in China. It aims to identify their deficiencies and propose solutions and measures to address these issues, thereby promoting the innovative development of the quality of graduate education in China.

## 2. Theoretical Foundation

The graduate education model is a standard paradigm and operational method created to achieve talent cultivation goals under the guidance of certain educational concepts and specific needs, encompassing all aspects of the process. The essence of the graduate training model can be summarized in three aspects: (1) It is guided by specific educational philosophies, particular needs, and high-level talent cultivation concepts, aiming to meet societal demands. (2) The core characteristic of graduate training is the unification of structure and process, representing a comprehensive integration of various elements within the training model. (3) The concept of graduate education lies between "running an educational institution" and "providing education." It encompasses questions such as the purpose of education, how to deliver education, and includes aspects related to the educational system. Graduate training takes various forms and can be categorized based on different criteria: by degree type, it can be divided into research-oriented and practice-oriented; by training objective, it can be divided into academic and professional; by elements of the training process, it can be divided into apprenticeship-based, vocational, cooperative, and instructional; and by organizational structure, it can be divided into school-based, department-based, and interdepartmental.

Graduate education is the source of China's technological innovation, an important origin of the nation's scientific and technological advancements, and a crucial support. Currently, there is an urgent need for highly qualified professional talents in China. In the context of the new era and new normal, cultivating

creative talents is fundamental to higher education institutions. Under new historical conditions, it is essential to proactively explore new talent cultivation models, reform educational concepts and systems, create a favorable atmosphere, and establish a sound support system. This will align with international standards, meet the needs of China's economic and social development.

## 3. Investigation of the Current Situation of Graduate Education in China

The main the graduate training model can be categorized into two main types based on disciplinary nature: "academic" and "professional". The former emphasizes academic aspects, while the latter focuses on practical application. Additionally, for academic master students, the emphasis should be on training doctoral students, whereas for professional master students, the focus should be on training master's students.

Due to its own reasons, China has from the outset pursued an "academic" path and did not adopt the "professional" or "applied" route. In terms of training conditions, basic requirements, evaluation criteria, quality assurance, and supervision systems, the academic degree graduate education system is more comprehensive compared to the professional degree system. Therefore, in the realm of educational reform in this field, China should pay more attention to improving teaching quality. It should continue to implement the progressive training model for master's and PhD students, aligning with disciplinary characteristics and international training requirements. Based on this, this study has conducted preliminary explorations into fostering innovative capabilities among graduate students and put forward corresponding suggestions. Currently, China has only been developing practical technical talents, especially professional technical talents, for just over a decade, and there are many issues. Therefore, accelerating the development of professional degree education in Chinese universities has become a crucial topic for the advancement of higher education in China.

It is said that by 2025, the total number of professional degree graduate students in China will reach approximately 60%, with 1.74 million individuals trained within three years.

In the coming period, domestic education for professional degree graduate students will continue to maintain its advantages. This marks a significant adjustment for China's advancement towards becoming a "manufacturing powerhouse" and actively adapting to regional economic and social development. It is a practical necessity in transitioning from a nation strong in science and technology talents to one that excels in them. This plan holds profound implications for the future direction of graduate education in China [3]. Therefore, in the early stages of higher education development, China mainly focused on academic graduate students. However, with the development of China's economy and society, the country's demand for professional talents has outstripped supply, leading to a series of social issues such as difficulties in graduate employment. Currently, China needs to cultivate a large number of strategic industries and build itself into a "manufacturing powerhouse," all of which depend on high-quality professional talents. Graduates who only emphasize theoretical knowledge can no longer meet the needs of China's economic and industrial structural transformation and development. Therefore, professional talents are crucial for future social development.

#### **4. Problems Existing in China's Graduate Education Model**

##### **4.1 Mismatch between Supply and Demand in Graduate Education**

Currently, China's higher education faces severe challenges, as traditional graduate education methods struggle to meet current societal needs. For example, many graduates find their academic qualifications "misaligned" with practical job requirements in real-life settings. If graduates produced by universities do not meet societal demands, it not only leads to difficulties in their employment but also results in wastage of human resources, thereby causing a series of social issues [4]. Graduate education should align with the needs of social development. However, currently, China's graduate education system still retains strong elements of a planned economy and has not yet established a rapid and efficient interactive regulatory mechanism. This has resulted in a significant "disparity" between the high-end

technical personnel produced by graduate education and the high-end talents needed by the market. As a consequence, graduates from China's graduate education system often do not meet the applied capability requirements of universities and research institutes. To meet diverse societal needs, China must comprehensively reform its graduate education methods.

##### **4.2 The Separation between Individuals and Society Caused by Graduate Education**

The commonly stated phrase "practice is the sole criterion for testing truth" is often overlooked in the cultivation of graduate students. In today's era, mere theoretical knowledge without practical application is insufficient. As society develops comprehensively, people need to enhance their education levels comprehensively to better adapt to this society. Graduates entering society possess theoretical knowledge but lack practical experience, creating a significant gap between theory and practical work. Consequently, they struggle to integrate effectively into actual work settings. Graduate students often lack essential skills, making it difficult for them to quickly adapt to new environments and apply their theoretical knowledge effectively. This lack of practical work experience and capability is a key factor hindering their success in rapidly changing social environments. In today's era of rapid development, theoretical talents struggle to meet the diverse demands of contemporary development.

##### **4.3 Decline in the Quality of Graduate Talents Caused by Traditional Educational Methods**

Generally speaking, the quality of graduate education is primarily measured by several distinct indicators, such as students' research capabilities, published papers, and participation in projects, among others. Graduates nurtured by a good graduate education institution can better meet the needs of societal development. For instance, publishing high-level research papers can demonstrate your capability to work in universities or research institutes. Despite the national efforts in recent years to vigorously promote graduate education and increase the number of graduates, the level of talent still

falls far short of the developmental needs of the times [5]. This paper finds through research that the main factors influencing the quality of graduate education in China include outdated talent cultivation concepts, outdated teaching methods, unclear educational objectives, disharmonious mentor-mentee relationships, and an inadequate supervision mechanism for graduate education. All universities have focused the reform of graduate education primarily on curriculum without considering societal needs, resulting in a significant disconnect between the quality of talent cultivated by universities and actual societal demands. As a result, some graduates are unable to fully realize their potential value, leading to substantial wastage of human resources.

#### **4.4 The Homogenization of Talent Assessment Methods**

Due to the influence of economic systems, China adopts a centralized management model in its talent cultivation mechanism, where universities approved by the government uniformly cultivate high-level and high-quality talents. However, this approach easily leads to talent clustering or universities failing to keep pace with societal needs. With national unified planning, enrollment, and training goals and plans, the cultivated talents exhibit homogeneity, which to some extent results in wastage of human resources. This teaching model emphasizes developing students' theoretical literacy but overlooks the diversification of disciplines and professions, the diversity of talents, and the increasingly complex societal demands [6]. Currently, there are the following shortcomings in assessing teaching effectiveness: insufficient emphasis on the teaching process and academic achievements of students that fail to meet workplace demands. When assessing graduates, government regulatory bodies take responsibility, and universities participate as evaluators according to government regulations. However, social involvement in this process is limited.

### **5. Exploration of Innovative Ideas and Implementation Strategies for Graduate Education Models**

#### **5.1 Innovative Graduate Education**

#### **Objectives Focus**

Some scholars propose that reforming graduate education methods should prioritize high-quality talent development. Therefore, it is essential to clearly define the goals of talent cultivation. Currently, in China's existing relevant and regulatory documents, the objectives of graduate education exhibit three trends: emphasis on external rather than internal factors, prioritization of quantification over quality, and focus on outcomes rather than processes. These trends are not conducive to identifying the intrinsic qualities of graduate students [7]. Sihui Cheng believes that from an internal perspective, graduate students should possess the ability for independent survival and understand the value and meaning of life. Master's students should not only have the essential qualities required at the undergraduate level but also possess rich thoughts, firm principles, noble character, and a well-rounded personality, contributing positively to society [8]. PhD students, in addition to the qualities expected of graduate students, must also integrate Eastern and Western learning, excel in both the arts and sciences, cultivate both emotions and intellect, and be knowledgeable and versatile [9]. Therefore, the educational approach for master's and doctoral students must be based on clear training objectives.

#### **5.2 Scientific Graduate Education System Formation**

To enhance the quality of talent development, it is crucial to optimize curriculum structure and refine the teaching system.

In optimizing the curriculum system, increasing the proportion of elective courses and incorporating interdisciplinary courses can enhance students' learning interests and promote their overall development [10]. At the same time, it is essential to fully mobilize graduate students to autonomously choose suitable majors and study plans, and actively engage in cross-disciplinary and cross-college course selection activities. Emphasis should be placed on offering compulsory professional courses in various disciplinary fields, with multiple course options for each specialization. Teachers should provide students with specialized lectures on new technologies, enabling them to stay updated on scientific and technological advancements both domestically

and internationally. Furthermore, implementing high-quality professional degree programs is crucial to promoting heuristic, research-oriented, and case-based teaching methodologies [11].

In the classroom, teachers should focus on cultivating students' self-learning abilities through a "self-learning-teacher guidance-group discussion" approach. This method integrates autonomous learning and guided learning through team mentoring, peer assistance, and group study activities. It bridges knowledge construction with practical scenarios to achieve the integration of theory and practice. In traditional teaching settings, the emphasis is primarily on imparting basic knowledge, whereas in the "teacher-student dual-subject" educational model, while knowledge transmission remains essential, more emphasis is placed on teacher guidance to facilitate student-driven learning. Teachers assess students' learning outcomes, identify their weaknesses, and comprehensively foster their critical thinking and practical skills.

### 5.3 Diversified and Differentiated Assessment Indicators Construction

Enhancing the evaluation system of graduate education in China requires a shift from the traditional academic assessment methods to the establishment of diversified and differentiated assessment indicators. Universities should actively respond to the needs of the times by emphasizing both internal and external assessments, particularly evaluations from industry institutions. When assessing professional courses, evaluations should include assessments of students' research proficiency and their understanding of the curriculum. Assessing graduate students' practical skills, learning abilities, and innovative capabilities serves as crucial criteria for measuring their quality [12].

The evaluation of graduate education quality should also take into account the characteristics of different types of students and conduct classification assessments accordingly. This paper proposes that the assessment of master's and doctoral degrees should be examined from three perspectives: (1) Contribution to high-level scientific research achievements, especially the contribution of doctoral degrees to this field. (2) Proportion of participation in national key

projects and various educational projects. Researchers' participation in scientific research and their experience gained from experiments should be considered. (3) Employment status of graduates in various research institutes. These three indicators can serve as a reference framework for the cultivation of master's and doctoral degrees. For the evaluation of applied graduate programs, particularly professional degrees, third-party evaluation and assessment should be conducted [13]. Specialized certification organizations should be responsible for improving and supervising these programs to ensure the educational quality of professional degree graduates and enhance their competitiveness in society.

### 5.4 Implementation of the "Dual-Supervisor" System

In graduate education, mentors play a crucial role. The "Dual-Supervisor" system refers to universities inviting external renowned scholars and young faculty members to collaborate on research, jointly mentoring graduate students, thereby significantly enhancing the quality of graduate education and promoting comprehensive development of graduate education quality in universities. This system is implemented in Chinese universities primarily to advance talent cultivation and foster discipline construction and development. Currently, there is a significant mismatch between the training direction of professional degree education in Chinese universities and the needs of the workforce. Therefore, mentors should assist graduate students in clarifying their research directions, promptly establishing their main learning objectives, employment directions, and career development paths, and guide them to actively participate in project research [14]. While enhancing students' research capabilities, it is also essential to involve them more in various social activities, enabling them to apply their acquired knowledge in practical settings.

Secondly, in accordance with the training objectives and graduation requirements of full-time professional master's degrees, strict implementation of the "dual-supervisor system" is necessary. It enhances the cultivation of "dual-mentor" teachers, clarifying their role and positioning. To enhance the effectiveness of external supervisors, universities should invite

professional experts with strong practical skills to serve as external supervisors, forming a "dual-supervisor system" in collaboration with school-appointed supervisors [15]. In terms of supervision, full-time faculty members within the college should focus on guiding fundamental theories, while external supervisors should emphasize practical guidance on applied issues, and participate in teaching courses, thesis proposals, and defenses. Furthermore, emphasis should be placed on cultivating practical skills among young faculty members, providing regular guidance, and refining innovative methods for graduate student supervision to comprehensively enhance the teaching standards of graduate supervisors. This approach not only alleviates the burden on teachers but also broadens students' educational channels, enriches their learning content, and enhances their knowledge levels [16].

### **5.5 Internationalization of Graduate Education**

Since the beginning of the 21st century, China has become increasingly open and fully embraced global integration. Graduate education methods need to proactively align with international standards and actively promote the internationalization of higher education.

Education centered around teachers and students, in the process of internationalization, and it depends on teacher internationalization. Enhancing the internationalization of local faculty is an important direction for the internationalization of graduate education in China. Graduate supervisors are the core force in graduate education, influencing its quality and level [17]. Graduate supervisors with international knowledge and overseas learning experiences can directly promote the internationalization of teaching and research. Teachers dispatched for visits and further studies can learn the latest technologies and specialized skills in their field, grasp the newest and best teaching concepts and methods, and integrate them into the actual work of graduate teaching and educational reform. For Chinese universities to achieve internationalization in graduate education, they need to focus not only on students' professional skills but also on their values,

guiding them with an international mindset and fostering their overall research competence, enabling them to proficiently write high-level research papers in foreign languages. This strengthens their international competitiveness, enabling them to better meet international exchanges and the country's service needs.

Universities can incorporate participation in online international academic symposiums into academic courses to assess students' academic communication skills. Additionally, they can precisely dispatch students based on individual circumstances, establish corresponding regulations to ensure students' safety and smooth learning abroad. "Cloud communication" has significantly promoted international educational exchanges worldwide, representing an innovative model of international academic and teaching collaboration that will advance global graduate education internationalization. Based on this, each university should adopt various approaches such as "online and offline," "virtual and real," "local learning," "on-site learning," and "overseas dispatch" according to its own characteristics. This will promote the internationalization of graduate education in China, enhance the quality and level of graduate training, and further elevate China's higher education to a higher level of openness to the world.

### **6. Conclusion**

This paper proposes new ideas for graduate education systems that align with the development needs of the current era, addressing the shortcomings of the existing system. To begin with, it defines the implications of the new context, clarifies the essence of graduate education in the new era, and explores its current development status. The article also analyzes the current situation of graduate education in China, identifying issues within ongoing reforms in university graduate education and teaching. Moreover, the study provides a profound explanation of various problems encountered in the process of graduate education, such as supply and demand of graduate training, quality of graduate talents, and the system of graduate management and evaluation. It emphasizes that reforming China's graduate education system requires collaborative efforts to establish a mature and robust system and mechanism.

Firstly, it suggests defining the direction of cultivating creative talents based on the strategic needs of national development. It underscores the importance of clearly defining the goals and directions of graduate education in China to better serve national economic construction. Currently, with China's rapid economic development, there is an increasing demand for professional degree graduates, shifting the focus from purely academic talents to professional talents. Secondly, it advocates strengthening disciplinary development and establishing a scientific system for graduate education. Key aspects include curriculum design, teaching activities, and research activities, which are critical for enhancing students' comprehensive capabilities. Therefore, improvements in curriculum design, including more elective and interdisciplinary courses, are essential to allow students to freely choose courses according to their needs. Thirdly, the article suggests enhancing China's graduate education evaluation system by moving away from the past emphasis on purely academic evaluations and constructing diversified and differentiated evaluation indicators. It urges universities to adapt actively to the needs of the times, giving equal importance to self-assessment and external assessment, particularly from industrial institutions. Evaluation criteria should focus on assessing students' practical, learning, and innovative abilities as crucial indicators of their quality. Fourthly, universities should actively implement the "dual-supervisor system" to provide graduate students with more diverse training methods and career paths. Fifthly, the article proposes a shift in the concept of graduate education to ensure breakthroughs in talent cultivation philosophy and professional development. China's higher education has made significant progress in talent supply and university reforms, particularly in fostering innovative, compound, and applied talents. Therefore, internationalization should be prioritized in China's graduate degree education, placing emphasis on cultivating creativity among graduate students.

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