

An Investigation into the Paths towards Enhancing the Quality of Postgraduate Education

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Abstract: Postgraduate education, specifically Master's student education, is a critical component of the higher education system in China. As China strives to become a leading expert in human resources, its postgraduate education has achieved notable success. However, with the recent expansion of enrollees in Master's programs, there is an urgent need to improve the quality of training. This paper analyzes the current trends in postgraduate education in China, which has become increasingly popular due to societal changes and demand for higher education. It also identifies the challenges faced by training units, including incomplete training mechanisms and mismatches in goals between teachers and students. Thus, it finally provides targeted methods to optimize the curriculum and enhance trainees' employment prospects to improve the quality of postgraduate education. These solutions aim to promote the in-depth development of postgraduate education, transform towards a model that prioritizes quality in addition to quantity, comprehensively improve the quality of self-taught talent, and nurture more innovative individuals to drive social development.

1. Introduction

The training of Master's students carries an important task of cultivating high-level talents and promoting innovation and creativity, playing a key role in supporting high-tech innovation^[1], and is the source of national development and social progress. Postgraduate education in China has been remarkably effective in recent decades. The number of enrolled students has continued to increase, the research achievements have become increasingly rich, and the role of Postgraduate education in promoting social and economic development has gradually strengthened^[2]. However, with the incomplete training mechanism and conflicting goals between teachers and students, there have been increasingly frequent phenomena of declining quality in postgraduate education^[3]. This is because the training of Master's students in China is still in its early stage, and various education institutions focus more on expanding scale to some extent, ignoring the improvement of the quality^[4]. In the new era of modernizing higher education by 2035, the government proposed in the working report to "accelerate the construction of a high-quality education system", requiring to vigorously cultivate strategic scientists, create a large number of first-class science and technology leaders, innovation teams, and cultivate a large number of outstanding engineers^[5]. This puts forward a new historical mission for China's higher education development, which is that the current postgraduate education

in China should not only expand its scale but also pay more attention to the quality of training. Improving the quality of postgraduate education will be one of the important tasks for the future development of Chinese higher education^[6]. This paper points out two major problems that still exist in the training of Master's students, namely the incomplete training mechanism and the conflicts in goals between teachers and students. Finally, it proposes two pathways, optimizing course teaching and paying attention to employment quality, to enhance the training quality of Master's students, with the aim of ensuring the fulfillment of the crucial mission of training high-level talents in China's postgraduate education.

2. The Situation of Postgraduate Education

2.1. The Transformation of Social Development Mode Leading to Changes in Talent Demand Structure

China is currently in a strategic opportunity period of adjusting and optimizing its industrial structure and transforming its economic growth mode. The development of modern service industry, advanced manufacturing industry, and high-tech industry requires a large number of high-level talents. In response to this need, the Chinese government has put forward the strategies of “adhering to science and technology as the primary productivity, talents as the first resource, and innovation as the primary driving force, and implementing the strategies of revitalizing the country through science and education, strengthening the country through talents, and driving development through innovation”. In the national talent empowerment strategy and innovation-driven development strategy, postgraduate education carries an important responsibility^[7]. In order to achieve these strategic goals, a large number of high-level professional talents with strong professional capabilities and occupational qualities are needed, who can creatively engage in practical work. The positioning of postgraduate education caters to the needs of national strategy, and has huge market demand and development potential in promoting industrial structure transformation, optimizing and upgrading, and enhancing independent innovation capabilities.

2.2. Increasing Demand for Higher Education from the General Public

As social structures adjust and living standards improve, education experiences continue to increase in value for personal development. As a result, an increasing number of students and professionals crave higher-level, prestigious postgraduate education to enrich their knowledge and improve their social competitiveness. Furthermore, with a large number of undergraduate students facing bleak employment prospects, many see continuing their education and pursuing postgraduate degrees as a means to alleviate this pressure. In 2013, a total of 1.76 million candidates sat for the postgraduate entrance exams, while projections for 2023 reflect a staggering 4.74 million candidates for this rigorous educational pursuit. This significant rise in figures signifies the strong demand and desire among populace to obtain advanced, cutting-edge education.

3. Existing Problems in the Training of Master's Students

3.1. Imperfect Training Mechanism

The traditional training mechanism for Master's students has created a separation between theory and practice, resulting in a disconnect between postgraduate education and the demands of society. Firstly, the course system primarily emphasizes the dissemination of theoretical knowledge and fails to fully reflect the latest scientific research and achievements^[8]. In particular, it overlooks the

application and practice of theoretical knowledge, which restricts the iterative updating and deepening of Master's students' knowledge structure. Secondly, the teaching approaches primarily rely on passive theoretical indoctrination and lack guidance, interaction, and exploration in the teaching process, impeding the development of the ability to identify, analyze, and solve problems. This will hinder the cultivation of student abilities and fail to meet the demands for innovative talents required for economic development mode transformation and industrial structure adjustment. Lastly, practical teaching has not been given the appropriate level of attention. Many local universities have not established cooperative training models with enterprises, and Master's students lack stable practical bases and cannot participate in social research activities. Construction of practical teaching bases fails to meet the needs of innovation and development in industry and application in the technical market, resulting in a low matching degree between the Master's students trained and the needs of society for high-level talents^[9].

3.2. Conflict of Goals between Teachers and Students

Master's students have limited time for studying and research while in school. Schools and advisors expect Master's students to participate more in research projects, to publish high-quality academic papers to improve research indicators, and meet the assessment requirements within this limited time. However, enterprises and students hope that Master's students can actively participate in social practices, possess “combat-ready” skills to better meet the needs of positions or job requirements, and obtain a Master's degree as a means of pursuing better employment opportunities. Therefore, students' motivation for improving academic levels and meeting school requirements is relatively low^[10]. Due to the inconsistent goals of multiple stakeholders such as schools, mentors, enterprises, and individuals in developing Master's students' personal abilities and desired goals, it is relatively difficult for students to find a balance between theoretical learning, research, and practical training. Thus, “imbalance” exists in the quality of training in both theory and practice aspects during the process of postgraduate education.

4. Pathways to Improve the Quality of Master's Students Training

4.1. Optimizing Curriculum and Teaching

Mastering strong theoretical knowledge and practical skills is a prerequisite for Master's students to embark on academic and practical pursuits. As a leading institution responsible for their education, universities should optimize their talent development approach to cater to market demands. They should be able to ignite students' learning passion in order to establish a necessary foundation for innovative thinking. In terms of curriculum content, cutting-edge knowledge and the latest case studies should be incorporated into classroom teaching. This will allow a nuanced combination of theoretical learning and social practice through research-oriented teaching approaches. To adapt to the current economic transition and transformation, universities should introduce an array of interdisciplinary courses based on students' needs. This broader academic exposure could enable Master's students to expand their spectrum of innovative thinking and disciplinary boundaries^[9], thereby satisfying demand for highly qualified and comprehensive talents, amidst the emergence of digital economy and progress in the technological landscape. To complement this context, modern educational methodologies like virtual simulations should be deployed to replicate practical experiences of real-life scenarios. This will nurture comprehensive critical thinking and ingenuity in solving problems. Therefore, in nurturing the innovative ability of Master's students, universities need to shift from traditional desituationized teaching models to a blended, interplay of theoretical and practical teaching. This would involve optimizing course designs, supplementing sophisticated

teaching methods to ensure the training process remains relevant and responsive to current market demands.

4.2. Paying Attention to Employment Quality

Although the goals of universities, mentors, enterprises, and individuals on the training of Master's students vary, achieving the targets of postgraduate education should be centered on the employability of Master's students. The ultimate goal of talent development for Chinese Master's students is to serve society and participate in the great practice of socialism. Therefore, it is essential to accurately track graduation rates and regularly conduct satisfaction surveys among graduating Master's students and their employers. The employment rate of Master's students, as well as the feedback and evaluations of students and employers after employment, are critical indicators of the supply-demand match between talent development units and the market. These indicators also provide important sources for improvement proposals of Master's student development quality among various talent development units^[11]. At the same time, by comparing the vertical graduation status of previous Master's students and the horizontal survey results of other Master's student development units, analyzing the strengths and weaknesses of postgraduate education, and learning from the experience and lessons learned in the postgraduate education process of other units, talent development units can optimize the quality of postgraduate education and meet the diversified demands of the high-quality talents in society.

5. Conclusions

In China, the situation of postgraduate education is increasingly bright. However, the country's postgraduate education has always been large in scale but weak in quality, which is yet to be resolved. In order to transform to a postgraduate education superpower, the development of postgraduate education in the new era will gradually deepen. To address issues such as an inadequate mechanism for integrating theory and practice and conflicts between individual ability development and student goals, it is necessary to optimize course teaching orientation by focusing on the market, improve training programs, and implement other measures. With the current scale of postgraduate education already large and still increasing, all parties involved in the education process must shift their focus to improving the quality of Master's student training. Achieving a balance between scale and quality should be the key priority of the government and universities. Ultimately, enhancing the quality of independently trained talents will help to create more outstanding and innovative talents for the society's development.

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