Exploration and Reform of Postgraduate Training Mode of Biology in Medical Colleges

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Abstract. Postgraduate Training is an important pathway to train and make innovative talents. How to establish an effective internal quality assurance system for graduate education, improve the quality of training, strengthen the training of innovation ability, and apply the theory of continuous improvement to all aspects of graduate work, and train the professional and practical senior talents who can meet the needs of the job and continue to pursue further education. This is an urgent problem for graduate education.

Introduction

In recent years, although the number of students enrolled in medical colleges and universities has gradually increased, there has been a marked polarization between the number of students enrolled in clinical medicine related subjects and the number of students enrolled in basic academic research related subjects. In particular, the number of graduate students enrolled in biology subjects shows a downward trend. Moreover, the number of students enrolled voluntarily at the first level was less than 20 per year, and the remaining 70 per cent were admitted by transfer. Even so, some mentors can't get students.

Postgraduate education is the highest level of education in the national medical education, which is responsible for the implementation of science and education strategy, knowledge innovation project and the training of highly qualified innovative talents[1]. In the case of the decline of the number of students, the quality of students is difficult to guarantee to some extent, so the quality of graduate education appears more important. it is the life of graduate education[2]. In view of this situation, how to further improve the quality of postgraduate training, the level of scientific research and enhance the capacity of social services, have become urgent problems in graduate education.

Therefore, how to strengthen the construction of the teaching staff, reform the postgraduate curriculum system, strengthen the active academic exchange atmosphere, and establish the internal quality assurance system of postgraduate education from many angles and all directions, is great significance to improve the quality of training and strengthen the innovation ability.

Strengthening the Management and Construction of Mentor Teams

Teacher is the inspiration and guide for graduate students. We will strictly enforce the relevant regulations on the management and duties of post-graduate instructors in basic medical schools, strictly strengthen and implement the examination work for the post-graduate instructors, and
strengthen the performance of each of the tutors in recruitment, training and day-to-day management. The guidance role of the tutor to the graduate students should be used to their full potential. The construction of the mentor team in the graduate training should be strengthened. The role and position of tutors should be clarified in the training process of graduate students. The tutors are the first responders, and they are responsible for the whole training process of graduate students, including the recruitment program and the training plan, the scientific research guidance, the opening of questions, the essay writing and the graduation defense.

Reform of the Postgraduate Curriculum

At present, the establishment of medical related postgraduate courses in China is too specialized and the academic training model is too basic, so that the subject content knowledge structure is single, knowledge is not broad, comprehensive ability is not strong[3]. In view of this, Some common technical training were added for Postgraduate Training in the biology specialty of medical college, including molecular biology technology, immunohistochemistry technology, cell culture and apoptosis detection technology, fluorescence quantitative PCR technology and basic medical experiment technology course of protein expression and separation and purification technology.

From the teaching content, teaching methods and so on, carry on the bold reform. According to each teacher's research work expertise and the latest research progress of each discipline, the relevant topic lecture content were added to enrich the curriculum and meet the needs of students in different research directions. In the teaching method, teachers are encouraged to change the original teaching method, advocate interaction between teachers and students, adopt heuristic, discussion type teaching, improve students’ participation awareness, and help students solve problems in learning and research work to improve teaching quality.

Enhancing Vibrant Academic Exchange

Academic communication ability directly reflects academic level. Training postgraduate academic exchange is also the process of the train of thought, improving experimental design and intellectual level[4]. National and international experts are invited to give lectures on an occasional basis to enhance exchanges among students, broaden their horizons, and enhance the quality of their scientific research. At the same time, the graduate students can also learn the technical methods and knowledge of different research fields and the frontier knowledge of the fields[5].

Implementation of Postgraduate Book Conferences and Academic Forums

By means of regular and unscheduled and continuous academic reporting system, we can have a strong academic atmosphere. The desire for research and knowledge with different academic resources are stimulated, and achieve the aim of cultivating the innovation ability of graduate students[6]. The organization of post-graduate book conference can enhance the academic atmosphere, enrich postgraduate and professional knowledge, improve the professional foreign language level and apply practical skills. At the same time, graduate students are required to consult relevant literature, make in-depth and systematic reporting. In this way, this activity can improve the ability of graduate students to sum up, the ability of language expression, scientific research ideas, provide a stage to show themselves, provide a platform for exchange of experience and mutual learning.

Strengthening Moral Education of Postgraduate Instructors and Postgraduates

Scientific research integrity is the quality that scientific research personnel must have. The study of "Measures for Prevention and Handling of Academic Misconduct in Institutions of Higher Learning" is carried out for every graduate tutor and graduate student. The spirit of learning is puted into practice, so that teachers, researchers and graduate students consciously resist academic misconduct.

Summary

At present, China's postgraduate education has entered a comprehensive improvement of the quality of the new stage. In order to meet the needs of social development, the reform of the graduate training model needs to be further deepened. While affirming the effect of the reform of the graduate
student training model in China, it is the endeavor direction of the applied graduate training in China to further understand the need for the training of applied talents in various fields and to adjust the training scheme and training methods of applied graduate students flexibly, keep abreast of the pace of social and economic development, and to align with the professional degree education in foreign countries.

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**References**


