



Role Change of Postgraduates in China's Education System

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Abstract: With the rapid development of Chinese higher education, postgraduate education has gradually gained public attention. As senior professional and technical talents, postgraduates are the main force of the country's cutting edge technological development. Compared to undergraduates, the study objectives of postgraduates have changed considerably, it is thus important that the learning method should also change correspondingly. Higher postgraduate education should therefore guide postgraduates to change their roles successfully. This study elaborates on why and how postgraduates can change their role, what postgraduates should do, future opportunities, and so on. The result of the study has great significance for the changing role of postgraduates in China's educational system.

Keywords: China's education system, postgraduates, role change

1. Why a change in role is needed

Postgraduate education is a senior stage of national education. Different from the previous education stage, postgraduate education has had its learning objectives changed considerably. Correspondingly, learning methods also need to change.

1.1 Infant

Infancy is the primary stage of development, where infants learn about the world around them. The learning objects of infants are natural things, which can only be mastered through easy games. At this stage, infants are curious about the world, and they have a strong thirst for knowledge. As noted by Krupskaya, "For children, play is learning, play is labor, and play is an important form of education." Similarly, Gorky noted that, "Play is a way for children to understand and change the world."

1.2 Primary school

The primary school phase is a stage when students begin to master the simple order of nature ^[1]. At this stage, the learning object is the simple abstract knowledge system, such as Chinese characters, Arabic figures, the English alphabet, and so on. This stage largely consists of compulsory knowledge input.

1.3 Secondary school

The secondary school stage is where students' knowledge reserves grow rapidly, and the learning object is a complex abstract knowledge system. Middle school students are required to study all kinds of natural scientific knowledge. This stage involves the cramming method for most students. A large amount of knowledge needs to be accepted by the students within a limited time, which will lead to some adverse reactions.

1.4 University

University is a learning stage for college students to gain higher knowledge. At the same time, college students also need to learn interpersonal communication, and develop social adaptability and integrated ability. The main learning object of college students is higher classical science theory ^[2]. After mastering classical theory, college students have a foundation for their further study or work. University education is mainly based on teaching, supplemented by practice teaching ^[3]. College students begin to have free time to develop their hobbies and specialties.

1.5 Postgraduate

The postgraduate education stage mainly develops students' scientific research ability. The main learning object is not classical theoretical knowledge, but frontline scientific knowledge. There is no mature teaching system for frontline scientific knowledge, which requires a change from the previous pedagogical postgraduate teaching and education methods, to active learning. After studying such scientific knowledge and combining it with their own research direction, postgraduates can use new methods to solve new problems.

2. How to change roles quickly

A prompt changing of roles is an important step for postgraduates to ensure that their thoughts lead to action. First of all, postgraduates must change their thoughts and ideology. This must be followed by a change of learning method, via the change of mind. The change of method promotes the change of action.

2.1 Change of mind

As the saying goes, thought is thine precursor to action, and knowledge is a prerequisite of faith. First, postgraduates must ideologically recognize the difference between postgraduates and undergraduates, and understand the situation that will be faced in the postgraduate stage. This will be a crucial step in the realization of role change. The change of mindset from teaching to learning, giving the teacher an explanation to students' own understanding, from completing an examination paper to the completion of a thesis, and from feeding-learning to the independent foraging stage and so on, is the correct beginning of the postgraduate stage.

It is a stage to understand things, gain theoretical knowledge, and expand one's thinking. As the stage of developing innovation, postgraduate education requires adjusting one's mentality to solve problems in researching new things. The mentality should change from traditional teaching to initiative learning, from rigid learning for teachers to giving ourselves a satisfying reply, from the examination questions of each test paper to the publication of excellent graduate papers, from a worker who uses every spare minute to study continually to a boss who learns to use and make decisions by himself. As Emerson said, "If a man is forever moving toward his goal, the whole world makes way for him". Thus, postgraduates should adjust their mentality and be fully equipped for moving forward bravely, despite all difficulties.

2.2 Change of method

Postgraduates' reading should change from classical textbooks to the core frontier documents, not only from their working lab but also outside the lab, from paper-books to e-books, and from Chinese to foreign material. It is key to read more new and high-quality documents to extend their understanding of relevant knowledge, and turn theory into a laboratory operation. It is crucial to personally test the knowledge learned from books. As the saying goes, it is a good well that has water. Meanwhile, postgraduates should know quantity is not a standard of a good well. Postgraduates must set goals of becoming a professional talent, and make full use of their energy in professional research projects. Being greedy or hasty does not pay or produce good results. Rather, it is the repeated and consistent explorations, operations, and investigations that are the essence of the research problem, which will eventually lead to their destination. Postgraduates should thus find new breakthroughs, constantly explore ways to get closer to their research goals, and search for more concise methods through repeated operations. This process of research and exploration is far from smooth, with various problems that need to be solved, and difficulties to overcome. However, when straying into the "dead end" of research, walking along arduous and tortuous roads, or falling into a muddy swamp, postgraduate students should be aware that they are not apprentices, but have solid professional knowledge, a mindset of being calm in the face of danger, the confidence to turn the tide, the ability to find the right solution, and can flexibly apply their theoretical knowledge of the classroom to scientific research.

2.3 The change of action

Jiang Shumao's "Spring of the Fishing Port" says "Only frozen flies, not tired bees," warning us to be a hardworking bee and build a large hive for shelter. In the process of experimental research, postgraduate students must actively participate in every operation of experimental practice, every record of measurement data, and every writing of experimental report.

Successfully completing experiments requires several stages. The first is the preparation before entering the lab; sharpening your axe will not delay your job of cutting wood ^[4]. It is necessary to have a full understanding of the tutor's research topic, direction, content, and related papers to know the direction of the lab. In order to gain knowledge, postgraduate students must be ready to study on their own. This is important in eliminating any confusion on entering the laboratory after a preliminary understanding of the subject and avoiding panic. In fact, it is necessary for postgraduates to master the subject knowledge, learn the process and methods of experiments comprehensively, communicate with class fellows, learn what they are doing, and how to carry out the experimental process as a supplement to complete the overall knowledge method, before entering the lab.

Second, after entering the laboratory, it is important to recognize that "". The main focus of postgraduates revolves around experiments and research, and their main partners are their lab classmates. A spirit of solidarity and good experimental habits are the basics of success in experimental progress. A sense of collective honor, a tacit spirit of cooperation, and resilience in the face of difficulties are the prerequisites for the sustainable development of the experimental team, and an important guarantee for a harmonious experimental environment.

At the same time, in the era of rapid development of interconnection and networking, using relevant learning software and academic search media is necessary to obtain the latest experimental information and theoretical support. The document sorting tool makes it particularly convenient to refer and sort documents. The network communication platform allows for better cooperation, sharing of experiences, and collective development. Such sharing and cooperation can also relieve the anxiety of the experiment, alleviate depressed emotions, and maintain a stable mindset needed to calmly perform an experiment.

It is the details that determine success or failure. For this reason, postgraduates should slow down their pace, think thoroughly, leave enough time for daily reflection, and sum up daily gains, scientific research experience and shortcomings, so that the soul of progress can keep up with the pace of progress. As the saying goes, good tools are essential to do the job well. While maximizing their strengths and avoiding weaknesses, postgraduates must pave the way for future experiments and goals.

3. What postgraduates should do

The postgraduate stage is different from the teaching stage. While being taught was the previous mode of learning, postgraduates now have to study independently. It is necessary for every student to conduct in-depth research in their own area^[5], and gain their own knowledge. Thus, there are many things that postgraduates can do, as explained below.

3.1 The scientific research project

A scientific research project is a research project in which the team leader unites the wisdom of the entire team in order to solve issues of national and social concern. Graduate students should actively participate in the process of application, implementation, and completion of scientific research projects. A scientific research project includes the research background, main research content, technology roadmap, innovation points, scientific issues, research foundation, and other elements. While participating in scientific research projects, graduate students can quickly understand the research field of their team and improve their independent research level.

Participating in the completion of scientific research projects is a considerable achievement. While postgraduates who have just entered the research field may not know how to begin, they only need to follow the steps of their tutor and senior fellows.

3.2 Scientific experiment

Scientific experiments are a process going from theory to practice, which is an important difference between postgraduates and undergraduates. Science guides the direction of technology, and technology expresses science in specific forms. Postgraduates are practitioners who transform theory into technology. In this process, scientific experiments contribute significantly to the cultivation of graduate students.

Postgraduates must first establish their own research direction with the help of their tutors, then determine the experimental plan, discuss the technical route, and then carry out their experiments. They can begin by conducting experiments with their seniors, and then move on to working on their own experiments after mastering the basic methods of experimental operation. They can carry out some regular experiments, and then conduct some high-demand, innovative experiments.

3.3 Academic papers

Writing academic papers is an essential skill for every postgraduate. Not only is the paper a thesis summarizing their key research results, but it is also a potential journal article sharing research on an international platform.

In order to master the characteristics of writing scientific papers, postgraduates should analyze a few such papers of excellent quality, in terms of structure, data, and results. By conducting similar research, students can analyze the experimental data and use professional software to draw it, because the experimental results can be better expressed through the legends. Lastly, the results should be compared and analyzed with the original.

3.4 Academic competition

Academic competition is also an important way to develop postgraduates' scientific research ability. By participating, postgraduates can develop academic writing skills, handwriting ability, summary and reporting capabilities, and research capabilities. The competition team should form teams on demand, learn from each other's strengths to offset their weaknesses, and know their responsibilities clearly. The focus of the academic competition is to find the innovation points of the participating projects, and then summarize the materials and display model about the innovation points.

Postgraduates should actively participate in some recognized and well-known international and domestic competitions, such as "the Challenge Cup" "BD-CASTIC" "WRC ASRA" "National College Students' innovation and entrepreneurship

competition of agricultural building environment and energy engineer” and so on. While participating in these competitions, postgraduates can develop their abilities, as well as gain awareness regarding the scientific research level of various universities.

3.5 Professional academic communication

Academics can inspire wisdom and facilitate the cultivation of creative ability. The significance of academic communication is not only in the expansion of ideas, but also the accelerated divergence of thoughts and development of knowledge.

While doing scientific research, postgraduates should summarize their scientific research results in time, and actively participate in academic communication. This includes sharing their research results in academic conferences, so that experts and scholars in the same field can understand their research direction. At the same time, postgraduates can learn from the reports of other experts and scholars, and further enhance their knowledge.

3.6 Youth league working

Youth league is not only for college students; postgraduates can also participate in it. The purpose of youth league is to help postgraduates who are busy with scientific research to relax through participation in collective activities, while also promoting the development of scientific research.

For postgraduates who are enthusiastic about teamwork, on the one hand, they can serve teachers and classmates, and on the other hand, they can improve their service, coordination, and management abilities, and find happiness in service. In order to strengthen their working abilities, postgraduates can participate in postgraduates’ unions and undergraduate class management, and take up posts such as school administrative assistants.

4. Future opportunities

Generally speaking, graduate students have two paths following their postgraduate study. One path is of a worker or entrepreneur, and the other is to pursue their doctoral degree. Both ways have their respective benefits and disadvantages, and postgraduates should choose the path right for them.

4.1 Work or entrepreneurship

Individuals holding a Masters’ degree can work in colleges, middle schools, primary schools, institutes, companies, or the government. They have a wider and better variety of choices compared to undergraduates. With low employment pressure and good working benefits, they have an improved quality of life. In addition, by start-uping themselves and using the knowledge learned, knowledge can be transformed into social productivity.

4.2 Study for a doctor’s degree

Studying for their doctoral degree is a good choice for many Masters’ students after graduating. For those who want to obtain a doctoral degree, they need to have a certain degree of scientific research, have the ability to innovate, bear hardships, resist the temptation of the outside world, and resist pressure from the disproportionate to status and age. There are many uncertainties in choosing the doctoral degree, such as the choice of research direction, graduation date, employment company, etc., which also need to be taken into consideration.

Once postgraduates choose to pursue their doctorate, they must get rid of all distracting thoughts, focus their minds on their research, read the relevant documents carefully, repeatedly consider the experimental route, carry out their experiments carefully, and record the data carefully.

Postgraduates should have a sense of mission and responsibility in their hearts, and make their own contributions to the development of the country. Colleges play a vital role in instructing and training postgraduates. Colleges should provide students with the platform needed, and lead postgraduates to change their roles in time so that they can enter the palace of scientific research as soon as possible.

5. Conclusion

Postgraduates are high-quality talents cultivated by the country, and they can significantly contribute to the country's development.

Compared with undergraduates, there are many new challenges facing postgraduates. These require postgraduates to change their roles. This study elaborates on the reasons such a change is needed, how it can be brought about, as well as specific steps postgraduates can take within such a change. The paper has great significance for the changing role of postgraduates in China's educational system.

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