

# An Empirical Study on the Relationship between the Ability of Scientific Research and Innovation and Employment of Master of Arts Postgraduates

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**Abstract.** There is a close relationship between the ability of scientific research and innovation and employment situation of Master of Arts postgraduates. The research on this relationship is related to the precise training of every liberal arts postgraduate and the further development of the country in scientific research innovation and employment choices. However, the current academic research on the relationship is very scarce. Based on this, this paper takes the full-time academic postgraduate students majoring in Sociology of grade 2015 in D school as the research objects, and finally selects three students as the main subjects to conduct in-depth interviews. The main finds are: Firstly, the ability of scientific research and innovation is the premise and foundation of employment. Secondly, the stronger the ability of scientific research and innovation, the higher the employment rate. Thirdly, the weaker the ability of scientific research and innovation, the greater the possibility of passive employment.

## 1. Introduction

In recent years, the ability of scientific research and innovation has increasingly become an inexhaustible driving force for the prosperity of a nation and a key factor in international competition. At present, for the cultivation of practical ability of science and engineering postgraduates, there is an increasingly mature training system in the practice teaching of higher education at home and abroad. Compared with this, the cultivation of creative practice and practical ability of Humanities and Social Sciences postgraduates is relatively weak. Reflected in the employability, the difference in access to employment opportunities is very large between Master of Arts and Master of Science and Engineering.<sup>[1]</sup>

Paying attention to the cultivation of the ability of scientific research and innovation of Master of Arts is a key step to optimize the education of Master of Arts in China, and it is an important way to improve the quality of training these postgraduates in China. In the long run, its goal is not only to cultivate the students' awareness of scientific research and innovation, to help them understand the academic trends of the discipline, and help them strive to stand at the forefront of international academic,<sup>[2]</sup> but also to better help these postgraduates make accurate career planning in the process of employment, and to help them get employment as soon as possible.

## 2. The contents of the ability of scientific research and innovation of Master of Arts postgraduates

At present, the content of *the ability of scientific research and innovation* has not been clearly defined in academic circles. Yang Shuzi (2001) pointed out that the innovative ability of postgraduates is the ability of postgraduates to put forward problems and solve problems. Zhu Qingshi (2002) pointed out

that the innovative ability of postgraduates includes curiosity and interest, intuition and insight, diligence and concentration as well as comprehension and memory. Ye Haizhi et al (2008) believed that the innovative ability of postgraduates was a combination of intellectual factors and non-intellectual factors, it mainly includes four elements: knowledge structure, innovative consciousness, innovative thinking and innovative practice.

Based on the existing theories in academia, this paper summarizes the content of *the ability of scientific research and innovation of Master of Arts* into six aspects, as described below:

### **2.1 Problem-finding ability**

Problem-finding ability, which is also the primary capability of postgraduate training. On the one hand, it mainly refers to the fact that postgraduates of Master of Arts can find problems and research directions from numerous research documents by consulting existing research literature and synthesizing the current situation of literature. On the other hand, it refers to these postgraduates can find problems and research directions from social reality.

### **2.2 The ability of accessing literature**

The ability of accessing literature mainly refers to the ability to search and consult domestic and foreign literature. The access includes searching paper literature and electronic literature. In the new era of fresh media, with the rapid development of information technology, the ability of searching electronic literature is becoming more and more important for postgraduates of Master of Arts.

### **2.3 The ability of summarizing**

The ability of summarizing mainly refers to the management of literature in different categories according to different themes or keywords. It also refers to take notes of the literature that has been read in time, summarize the research results, research perspectives and research methods of these scholars. And finally, these postgraduates should have a try to write out the common characteristics and the problem existing in a certain kind of literature on this basis.

### **2.4 The ability on investigation and design**

The ability on investigation and design mainly refers to postgraduates should compare, screen, explore, validate and analyze the problems found through empirical investigation. The feasibility of investigation and research should be fully considered when designing investigation, including feasibilities for theories, investigation methods and conditions, finance and human resources.

### **2.5 The organizational implementation ability**

The organizational implementation ability mainly refers to the cooperation of various parties in the process of conducting social surveys, which can exercise abilities of internal communication and external contact of these students, and ensure that the investigation process can proceed smoothly.

### **2.6 The ability of scientific research expression**

The ability of scientific research expression mainly includes oral expression ability and written expression ability. It reflects the thinking logic, emotion, mentality, and vision of Master of Arts postgraduates, and also reflects these students' control ability, overall situation consciousness and psychological situation.

Based on the research theme and content, this paper mainly investigates the ability of scientific research and innovation of Master of Arts in school through the level of scientific research and innovation. And the level is mainly measured by the following questions: "As the first author, how many papers have you published?" "As the first author, how many high-level papers have you published?" "How many project researches have you participated in?" "How many project researches you have participated in were presided over by your tutor?" "How many times have you participated in social surveys?" "How many academic exchanges have you participated in?" "How many academic awards have you received?"

### 3. Research design

At present, there are abundant studies on *the ability of scientific research and innovation of postgraduates* and *the employment situation of postgraduates* in academic circles, but their research objects are often science and engineering postgraduates. There are fewer studies which put *Master of Arts* as research objects. And the research on *the relationship between the ability of scientific research and innovation and employment of Master of Arts* is even more deficient. Therefore, based on the accessibility of the research content, this paper takes the full-time academic postgraduate students majoring in Sociology of grade 2015 in D school as the research objects, and after considering situations of the ability of scientific research and innovation and employment of these postgraduates, three students are selected as the main subjects to be interviewed. During the whole interview process, with the permission of the respondents, we recorded the interview content with a recording pen, and recorded the respondents' important answers and their behavior in detail. The interview lasted from 9:00 to 12:00 on December 15, 2018. Situations are detailed in the table below.

Table 1. Situations of respondents' the ability of scientific research and innovation and employment

Name	Gender	As the first author, how many papers have you publicshed?	As the first author, how many highlevel papers have you publicshed?	How many project researches have you participated in?	How many project researches you have participated in were presided over by your tutor?	How many times have you participated in social surveys?	How many academic exchanges have you participated in?	How many academic awards have you received?	Employment Situation
Xiao Li	Woman	3	0	2	2	1	3	3	Waiting for a job
Xiao Wang	Woman	8	0	4	3	4	6	5	Working in a provincial enterprise
Xiao Zhang	Man	10	2	6	3	4	6	5	Working in a government department

### 4. Main findings

Through the interview, we find that there is a close relationship between the ability of scientific research and innovation and employment situation of Master of Arts postgraduates: Firstly, the ability of scientific research and innovation is the premise and foundation of employment. Secondly, the stronger the ability of scientific research and innovation, the higher the employment rate. Thirdly, the weaker the ability of scientific research and innovation, the greater the possibility of passive employment. Specific analysis is as follows:

#### 4.1 The ability of scientific research and innovation is the premise and foundation of employment

The basic role of the ability in employment is reflected in the whole employment process of Master of Arts postgraduates.

Before looking for a job, the abilities of finding problems, consulting documents, summarizing can lay a foundation for choosing the direction of employment and collecting recruitment information in time. All three students agree with this view very much: Xiao Zhang said that it was because he wrote many papers independently during his postgraduate period that he developed the good habit of paying attention to everything, keeping sensitivity, judgment and perception of employment information at all times, so that he had collected the recruitment information of some posts over the years before he looked for a job. Xiao Wang said that she spent a long time in choosing the direction of employment, during her second year of postgraduate education, she had begun to participate in

various types of job fairs, and these abilities of collecting these job fairs and searching, comparing and summarizing recruitment information are developed in the process of writing papers. Xiao Li also said that it's the abilities of finding problems, consulting documents, summarizing that broadened her career choice path, and helped her collect and collate more employment information.

In the process of seeking a job, the abilities can lay a foundation for the interview process and other links. The attitude of the three students in this respect is the same: Xiao Zhang said that before each formal interview, he would simulate the interview scene according to his own situation, and repeatedly practice the unexpected situation he could foresee, to ensure that he kept clear thinking in the formal interview process. And all these are related to his strong ability of scientific research and innovation. Xiao Wang said that in the process of no-leader group discussion, the interviewee's behavior directly reflects her own logic, personality and adaptability. In this respect, it's her ability of scientific research and innovation that made her not afraid of such interviews. Xiao Li also said that although she seldom had the opportunity to attend the interview, she did realize her lack of language expression and logical thinking when answering the interviewer's questions, which is closely related to her low ability of scientific research and innovation.

After finding a job, the ability directly reflects a person's working ability and efficiency. According to Xiao Wang's description, she is working in a provincial enterprise. The nature of her work needs strong abilities to find and deal with problems. In this regard, Xiao Wang said that the ability of scientific research and innovation she got during her postgraduate period has helped her learn a lot. On the one hand, the ability of finding problems has trained her unique path, thinking and habits of finding problems, taught her to pay attention to everything at work, and this allowed her to take a step ahead of others in anticipating possible problems in her work. On the other hand, her ability of access literature has enabled her to learn widely and master the methods of collecting various documents. In addition, she said that the ability of summarizing and expressing scientific research helped her to successfully complete the work plan and stage work summary. And it's the ability to investigate, design and organize implementation that enabled her to cooperate friendly with colleagues in various departments, and accomplish the corresponding tasks smoothly.

#### **4.2 The stronger the ability of scientific research and innovation, the higher the employment rate**

Existing research shows that there is a typical positive correlation between the employment of postgraduates and the three scientific research activities: academic exchanges, tutorial projects and social surveys.<sup>[3]</sup>

Through this interview, we can find that the stronger the ability of scientific research and innovation, the higher the employment rate of graduate students. Xiao Zhang is a typical representative of such students. He said that by participating in a number of project researches, he not only broadened his professional horizon, increased academic interests and research abilities, but also improved his level of moral cultivation. And participating in the researches presided over by his tutor, in particular, can stimulated his spirit of research and struggle. Because in the process of participating in the project, the exchange and collision of research ideas and research methods stimulated each participant's innovative thinking, and the uncertainty and complexity of the scientific research subject tempered everyone's will and character. Publishing academic papers, especially high-level papers, was a direct test of his writing and expression ability, while participating in academic exchanges was a test of his oral expression ability. In addition, participating in social surveys not only further tests his level of scientific research, but also cultivated his innovative consciousness, and more importantly, promoted cooperation and exchanges between him and other members of the team, and improved his interpersonal skills. All of this cannot be provided by simple paper writing and project activities, and is also the most valued by employers in the process of employment.

### 4.3 The weaker the ability of scientific research and innovation, the greater the possibility of passive employment

It is very difficult to find a satisfactory job in the post-graduate stage without in-depth scientific research training and higher ability of scientific research.<sup>[4]</sup> Through the research, it is found that the weaker the ability of scientific research and innovation, the greater the possibility of passive employment. Xiao Li is a typical representative of such students. She said that her goal of postgraduate study was to eventually find a more satisfactory job. For her, there was a certain deviation between the achievements and abilities in scientific research and the requirements of the job she wanted to obtain for the ability of the applicant. Therefore, throughout the postgraduate period, her efforts in scientific research were limited, she did not actively participate in more scientific research projects or academic activities, and published very few papers. This led to her weak ability of scientific research and innovation as a whole. So she is often in a passive state in the process of employment. According to Xiao Li's description, during her third year of postgraduate education, she took part in a lot of job fairs, submitted many resumes, and participated in many recruitment examinations of enterprises and institutions. During the period, she had the opportunity to participate in several interviews. However, at the same educational level, when recruiting talents, the employer would give priority to those graduate students who have excellent academic achievements and more scientific research achievements. Therefore, she often encounters difficulties in interviews, and ultimately did not receive an offer. Up to now, she is still at a loss when she chooses to work, and she is still in a state of unemployment.

## 5. Conclusion and outlook

Limited by time, funds, personnel and other factors, the conclusions of this study have some limitations: On the one hand, this study only interviewed some of the postgraduates of Sociology, lacking of empirical investigation on the relationship between the ability of scientific research and innovation during school and employment after graduation of other Master of Arts. On the other hand, this paper only discussed the relationship between the ability of scientific research and innovation and quantity of employment of Master of Arts, it has not been explored in other aspects of employment, such as the quality of employment.

Nevertheless, there is a close relationship between the ability of scientific research and innovation and employment situation of Master of Arts postgraduates. It can be seen that in order to improve the employment competitiveness of Master of Arts postgraduates, it is particularly important to focus on improving their ability of scientific research and innovation, which is also the goal that colleges and universities need to further implement.

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