

Group Images of Post-Graduate Students

-- A Grounded Theory Analysis of the Principals' Speeches at the Opening Ceremonies

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Abstract

Post-Graduate education shoulders the important mission of cultivating high-level talents and is an important cornerstone of national development and social progress. The core competencies of post-graduate students can effectively clarify the expected graduate students. The principal's speech at the opening ceremony integrated expectations for the role of post-graduate students and pointed out the direction for graduate student development. This research takes 50 opening ceremony speeches of the different principals and adopts the Grounded theory to describe the group images of expected post-graduates. Research has found that in the expectations of principals, academic research literacy is a key ability for post-graduate students, self-character is the internal driving force for graduate students, and responsibility is the external driving force for graduate development.

Keywords

Post-graduate students, Core competency, Principal.

1. Introduction

General Secretary Xi Jinping pointed out that post-graduate education is crucial in cultivating innovative talents, improving innovation capabilities, serving economic and social development, and promoting the modernization of the national governance system and governance capabilities. As the highest level of national education, it shoulders the important mission of cultivating high-level talents and innovation and is an important cornerstone of national development and social progress. "What kind of post-graduate students should we cultivate and how to cultivate" are the fundamental questions for the post-graduate education system. The clarity of core competencies helps us to deeply understand the central questions of "What kind of people, how, and for whom should we cultivate." It can concretize and refine the Party's educational policy and implement the fundamental task of education. In 2016, the core competency research group released the development of the core competency of Chinese students, clearly dividing it into three aspects: cultural foundation, independent development, and social participation, as well as six significant sub-competencies such as cultural foundation, independent development, and social participation. However, there are inevitably differences in core competencies among different age groups. Gao Wei pointed out that future research on core competency will focus on the substantive content among students of different age groups. Prior researches on the core competencies of post-graduate students mainly focus on theoretical speculation. While the core competency research group clearly pointed out that the clarity of core competency elements requires not only top-down academic research but also scientific support and feedback from empirical data such as expert opinions. The university principals are the concentrated embodiment of the university spirit. As an educator and spiritual leader of teachers, the principals' expectation for post-graduate students deserves

broader attention. As the first lesson of ideological and political education in universities, the principal's speech at the opening ceremony is considered a kind of presence used to summon the essence of the university through words. These speeches reflect the university's spirit, intending to arouse young students' admiration and pursuit of higher energies. The principal's speech at the opening ceremony can reflect the expectations of himself and the entire university towards post-graduate students and help them know the possible paths for their development. The speeches of the principals are essential documents for summarizing and refining the core competencies of college students.

Aiming to answer the research question of "what kind of post-graduate students should be expected by the principals," this study took the speeches of the principals at the opening ceremonies of post-graduate students in 2020, 2021, and 2022 as the subjects, guided by the grounded theory and analyzed 50 speeches of principles in total to depicting the group image of the post-graduates expected by the principals and glimpse the core competency framework of post-graduate students.

2. Methodology

2.1. Selection of Texts

Table 1. Texts

Texts	Texts
University of Science and Technology Beijing-2020	Capital Normal University-2021
University of Science and Technology Beijing-2022	Sichuan University-2020
Beijing University of Posts and Telecommunications-2020	Sichuan University-2021
Beijing University of Posts and Telecommunications-2021	Sichuan University-2022
University of Electronic Science and Technology of China -2021	Sichuan Normal University-2020
University of Electronic Science and Technology of China -2022	Sichuan Normal University-2021
Guizhou Normal University-2022	Sichuan Normal University-2022
Guilin University Of Electronic Technology-2022	Taiyuan University of Technology-2020
Harbin Engineering University-2021	<i>Tianjin University</i> -2021
South China Normal University -2021	<i>Wuhan University</i> -2020
Huazhong University of Science and Technology-2020	<i>Wuhan University</i> -2021
Huazhong University of Science and Technology-2021	<i>Wuhan University</i> -2022
Huazhong Agricultural University-2021	Wuhan University of Science and Technology-2020
Huazhong Agricultural University-2022	<i>Xi'an Jiaotong University</i> -2020
Lanzhou University-2022	<i>Xiangtan University</i> -2020
<i>Nanjing University of Aeronautics and Astronautics</i> -2022	Zhejiang University-2020
Qingdao University-2020	Zhejiang University-2022
Tsinghua University-2020	Zhejiang Gongshang University-2022
Tsinghua University-2021	Zhejiang Gongshang University-2022
Tsinghua University-2022	China University of Petroleum-2020
Shanxi University-2022	China University of Petroleum-2022
Shanghai Jiao Tong University-2020	Zhongnan University of Economics and Law-2020
Shanghai Jiao Tong University-2021	Chongqing University-2020
Shanghai Jiao Tong University-2022	Chongqing University-2021
Capital Normal University-2020	Chongqing Jiaotong University-2021

Based on the research questions, this study used a cluster sampling method to collect 50 speeches of university principals at post-graduate students' opening ceremonies, a total of 150000 words of research texts. It should be noted that during the collection process of principals' speeches, the research only collects addresses for post-graduate students at the opening ceremony. The analysis only focuses on the principals' speeches; other speeches are not included in this study. (See Table 1 for details)

2.2. Research Methods and data analysis process

With the help of NVivo 12.0 software, the Grounded theory paradigm (Strauss & Corbin, 1998) was employed in this study since the theorizing approach is the most effective paradigm for qualitative research (Patton, 2014, p. 124). NVivo 12.0 can assist researchers in collecting, organizing, analyzing, presenting, and testing the reliability and validity of materials such as texts, images, sounds, videos, and web pages. It can enhance the rigor, reliability, and interest of qualitative research. Focusing on research issues, the study conducted a three-level encoding process for text materials: open, axial, and selective coding.

2.2.1. Open coding

During open coding, the researcher examines, compares, and conceptualizes data with an open mindset without any preset conditions. The requirement for coders in this link is to "keep open and close to data." Based on repeated reading and understanding of the research texts, the study used a line-by-line analysis method to extract the meaning of the data and extracted initialization concepts through comparison and summarization (examples are shown in Table 2). The open coding process formed 55 initialization concept codes and 761 reference nodes.

Table 2. A Sample of Data Coding Steps

No.	concept	Nodes	text
1	"willing to sit on the bench."	9	With "ten years of grinding a sword" and "willing to sit on the bench" of patience and focus on truth (Wuhan University 2021).

2.2.2. Axial coding

Axial coding refers to forming categories, attributes, and dimensions based on open coding and the relationships between categories. By looking for some relationship between initialization concepts, such as causality, similarity, etc., axial coding will associate available codes to form a new category. During the process of open coding, there are words like "willing to sit on the bench," "focus," "diligent in the study," "steadfast in learning," "ten years of sharpening a sword," and so on. After carefully analyzing context and semantics, the essence is to encourage post-graduate students to "persevere" and maintain perseverance on the path of scientific research. Therefore, in Axial coding, they are all classified as "academic spirit of scientific research." According to this classification, 55 initialization category codes are organized into eight subcategories and three main categories.

2.2.3. Selective Coding

Selective coding involves an in-depth analysis of the categories formed by 2.2.2. Axial coding, understanding the relationships between categories, extracting core categories, and explaining the logical relationships between categories. This study takes the post-graduate student group image expected by the principal as the core category, including three dimensions and eight elements of academic research literacy, self-character, and responsibility. In the expectations of principals, "academic research competence" is a key ability for post-graduate students, mainly including academic research spirit, such as "seeking truth." With a solid theoretical foundation, academic research ability can write papers based on the real problem in China.

Academic research thinking, such as international perspective and interdisciplinary awareness. In addition, “personality” is the endogenous driving force of post-graduate students, covering three elements: humanistic sentiment, human and self, and the other and me. Responsibility is the expectation of principals for post-graduate students to participate in society with a sense of patriotism and a shared future for humanity.

2.2.4. The reliability and validity of the study

The reliability and validity of research are guarantees for the validity of research results. This study involves a large amount of text coding analysis work, which is easily influenced by the subjective factors of the researcher. The reliability of the study can be tested by calculating Cohen’s Kappa K coefficient with the employment of NVivo12.0 qualitative analysis software, During the encoding process, the researcher and another doctoral student in education encoded the text content separately. Under the processing of encoding comparison and encoding calculation programs, the K-coefficient of the study was 0.87, more significant than 0.75, indicating high reliability. On this basis, the study invited two doctoral supervisors to verify the coding results' validity, ensuring the coding's accuracy and consistency.

3. Findings

3.1. Keywords for post-graduate students' group image expected by the principal: “Innovation” is the First Essence

Word frequency analysis is a method of looking at the essence through phenomena, which calculates the frequency of core vocabularies, such as keywords and topic words appearing in particular literature, and determines the emphasis and development direction of the literature based on the frequency of occurrence. Fifty principals' speech texts were analyzed for word frequency on NVivo qualitative text software, and queries were run with “perfect match” to generate the word cloud in Figure 2. According to the number of occurrences in the text, the top thirty keywords are “innovation,” “research,” “learning,” “state,” “university,” “science and technology,” etc. (as shown in Table 3). The term “innovation” has a total frequency of 587, far surpassing other words and becoming the highest expectation of principals for post-graduate students.

Table 3. Words Frequency

Word(s)	counting	Word(s)	counting
innovation	587	society	196
research	428	matter	189
learning	376	school	175
state	348	talent	171
university	305	education	167
science and technology	272	scientific research	167
science	271	cultivate	153
great master	269	aspire	151
development	262	require	148
spirit	239	life	147
hope	231	human	145
time	223	ability	143
China	210	technique	142
study	208	knowledge	139
world	200	COVID-19	136

The term “innovation” can become the keyword for the post-graduate students’ group image that the principal expects, which is an inevitable requirement of social development for education and an inherent prescriptive direction of the three primary responsibilities of universities, among which talent cultivation is fundamental, scientific research is the path, and social service is the goal. For a country, innovation is a key factor in ensuring national social development and international competition. In 2012, the State Council of the People’s Republic of China issued the “Opinions on Deepening the Reform of the Science and Technology System and Accelerating the Construction of the National Innovation System,” marking a new milestone in China’s emphasis on innovation awareness. Accelerating the output of innovative scientific research achievements is the country’s expectation for education. For scientific research, innovation consciousness is its lifeblood. Innovation awareness is the key to finding, advancing, and solving problems from existing research. The construction of an innovation system and the foundation of an innovative country lies in cultivating innovative talents. As early as 1998, the United Nations Educational, Scientific and Cultural Organization (UNESCO) explicitly stated that higher education institutions should consider innovation as one of the goals of higher education. China has also issued documents emphasizing cultivating students with innovative awareness, creative thinking, and innovative spirit. In this context, it is inevitable that “innovation” has become the highest expectation of principals for post-graduate students.

3.2. Principals’ Expectations for Post-graduate Students: Core Competency Structure

Through data encoding analysis, the principals’ speeches can reflect the principal’s expectation that post-graduate students should possess good self-character, solid academic research literacy, and high social responsibility. The number of coding nodes shows that principals relatively less explicitly mention self-character development. The principals mainly advise from “Mingde” and “Zhishan” perspectives in university, hoping that post-graduate students can cultivate humanistic sentiments and handle their relationships with themselves and others well. Academic research literacy is placed at the core by principals. It is considered an essential ability of post-graduate students, which includes academic research spirit, academic research thinking, and academic research ability. At the opening ceremony, the principals focused on explaining the spirit of scientific research and academic thinking to post-graduate students from different academic backgrounds. The best expectations of principals for post-graduate students’ social participation are “having the entire motherland in mind” and “sharing a common destiny.”

3.2.1. Key competencies for post-graduate Development: academic research literacy

Post-graduate students engage in “research,” so “academic” is the biggest difference between them and other phase students. The core of post-graduate education is to cultivate their scientific research ability. During the coding process, 477 nodes are encoded for “academic research literacy,” accounting for 62% of the total coding nodes. This feedback indicates that in the post-pandemic era, principals place the academic research literacy of post-graduate students at the core. From the coding results, academic research literacy can be divided into three dimensions, namely “academic research spirit,” “academic research thinking,” and “academic research ability.”

3.2.2. Internally driven for post-graduate students’ development: Personality

Compared to academic research literacy, the principals’ speeches emphasize the personality of post-graduate students less. The data encoding shows only 109 reference nodes in the “personality” dimension, accounting for less than 15%. In this category, principals emphasize “humanistic sentiments”, “people and oneself” and “people and others”.

3.2.3. External traction for post-graduate development: responsibility

Responsibility is one of the core qualities for Chinese students to develop, mainly referring to the emotional attitude, value orientation, and behavior style formed by individuals in dealing with social, national, international, and other relations. One of the functions of education is to achieve social development through “adulthood”, and learners’ participation in social governance is an essential part of education. As post-graduate students with the highest educational level, society places higher expectations on their social participation. In data coding, there are a total of 175 nodes in the “responsibility” dimension, accounting for 22%. The two dimensions of “responsibility and responsibility” are “national sentiment” and “shared destiny of humanity”.

4. Discussions

Liu Tiefang et al. (2013) pointed out that the principals’ speeches at the opening ceremonies are commitments to students and society. Those words are expositions of his school’s governance and academic philosophy. In this study, the “group image of post-graduate students expected by the principal” projected in the principals’ speeches at the opening ceremony of post-graduate students is not only a guide for the principals to follow the path of post-graduate students but also an explanation of the principals’ academic philosophy in the management of post-graduate students in universities. Based on the three-level coding analysis of Grounded theory, this study concluded that in the post-epidemic era, principals believe that the academic quality of post-graduate students in scientific research is the key ability, personality is the internal driving force, and responsibility is the external driving force. This study responds to the existing framework of core competencies for post-graduate students but also feedback that principals place excessive emphasis on the academic research literacy of post-graduate students. As the top manager of a university, the expectations conveyed by the principal serve as a link between the university and the society.

At the national level, the image of post-graduate students expected by the principal explicitly manifests society and the state’s expectations for post-graduate education in universities. On the one hand, principals face evaluations from society towards universities. In 1985, the Central Committee of the Communist Party of China issued the Decision of the Central Committee of the Communist Party of China on the Reform of the Education System, marking the beginning of the “evaluation of the level of higher education institutions,” The evaluation of universities by relevant regulatory departments and social institutions is endless, including teaching evaluation, subject evaluation, degree point evaluation, university ranking, “Double First-Class” construction, QS ranking, etc. The university evaluation system and evaluation indicators project the quantitative thinking of objectivism, and scientific research has become the most critical and objective indicator for university evaluation. Research has pointed out that the proportion of scientific research quality in the THE-QS ranking indicator system is as high as 60%. As research assistants and team collaborators of mentors, the development of post-graduate students’ academic research literacy is directly related to the research output of universities. On the other hand, the evaluation system for the quality of post-graduate education in relevant documents of the Ministry of Education has also evolved from subjective to objective, with a phenomenon of evaluation “alienation” such as focusing on the number of published papers. The release of documents such as the Opinions of the State Council Academic Degrees Committee and the Ministry of Education on Strengthening the Quality Assurance and Supervision System of Degree and Post-graduate Education, the 13th Five Year Plan for the Development of Degree and Post-graduate Education, and the Opinions on Accelerating the Reform and Development of Post-graduate Education in the New Era highlights the importance that the country attaches to post-graduate education. But these documents again emphasize the

importance of universities on the quality of the post-graduate thesis and research output, emphasizing the strengthening of post-graduate research ability cultivation. For example, Zhu Aiwu (2016) summarized that “there is less attention paid to the development of the necessary character and key abilities of education master's students as ‘people’.”

At the university level, the group image of post-graduate student expected by the principal will directly affect all aspects of post-graduate student training in various universities. Overemphasis on scientific research can lead to a shift in the focus of post-graduate work, resulting in a focus on scientific research over others. This will not be conducive to developing post-graduate education work, such as curriculum, emotions, post-graduate education work, and even “cultivating morality and talent.” The direct perception of post-graduate students towards this comes from the scholarship evaluation index system, which is the best example of reflecting the university's orientation towards post-graduate education. It also serves as a valuable guide for post-graduate students during their studies. The Interim Measures for the Management of Post-graduate Scholarships issued by the Ministry of Education in 2013 clearly state that post-graduate scholarships motivate post-graduate students to study diligently, devote themselves to scientific research, be brave in innovation, and actively strive for progress. Subsequently, under the guidance of temporary measures, universities refined their evaluation methods for post-graduate scholarships. Further, they clarified the path for post-graduate students to enter the university during school. Among these evaluation indicator systems, “ideological and moral education,” “course grades,” and “scientific research achievements” are standard evaluation dimensions, among which “scientific research achievements” are the most critical indicators. Under the guidance of the above evaluation system, post-graduate students will naturally lean towards scientific research in self-growth, and their physical and mental health, values, and emotions will be intentionally or unintentionally ranked behind scientific research. This will have significant adverse consequences for post-graduate students, their families, and society, and therefore must be taken seriously.

Core competencies are considered the personality traits and critical abilities that students gradually develop in the process of receiving corresponding education stages to adapt to lifelong personal development and social development, and three Complete Education has been elevated to a critical height. Research suggests that as university educators and managers who connect universities and society, principals should pay more attention to the development of post-graduate students' personality traits in their future education work, with moral education as the foundation and “responsibility and responsibility” as the starting point, and attach importance to the comprehensive development of post-graduate students themselves.

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