

# A Bibliometric Analysis of Doctoral Candidates' Enrollment Policies in China

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## Abstract

As the entrance of doctoral education in China, doctoral candidates' enrollment is closely related to the quality of doctoral education. Because the policy literature truly reflects the government's signature on the handling of related public affairs. So the study on it can help clarify the government's management thinking and motivation for the enrollment of doctoral candidates. Based on the analyzing the structural elements of the national doctoral candidates' enrollment policy literatures from 1981 to 2017, this article is aimed at exploring the characteristics and historical changes of the doctoral candidates' enrollment policy literatures in the time of promulgation, the organization of the enactment, and the types of documents.

**Keywords:** doctoral candidates' enrollment policies, bibliometric analysis, promulgation time, issuing agency, document type

## 1. Introduction

In 1978, China resumed the National Higher Education Entrance Examinations and re-enrolled post-graduate students, which brought the phenomenon graduate education system was cancelled for Cultural Revolution for 12 years to the end. This year is the fortieth anniversary of the resumption of graduate student education, enrollment becomes a hot point for community discussion. As an important component of postgraduate enrollment, the origin and development of doctoral candidates' enrollment will become the focus of attention.

With the gradual shift from linguistic category to public management category of public policy research, coupled with the influence of quantitative trends in social science area, researchers begin to quantitatively study policies by coding them according to their content features and attribute features (Tao Ren 2017). Based on the structural element of policy literatures, the quantitative analysis of policy literatures can be divided into the following four categories: time, language, policy-issuing agency and subject word (Cui Huang 2016). However, due to the lag in the development of public policy analysis in China, the thought inertia of qualitative research, and the incomplete knowledge structure of subject talents, the situation of the quantitative analysis of public policies in China can be described as deficient (Yu-fei Fu 2013), especially for doctoral candidates' enrollment policies studies.

In view of this, the article will analyzes the general features and its changes of the elements of the doctoral candidates' enrollment policies by selecting the time, the enacting agency and the type of policy literatures as the research perspective.

## 2. Sample Selection and Data Sources

Before the sample selection, it is necessary to define the connotation of "Ph.D. student admission policy". Scholars define policies from different perspectives, positions, and environments. The concept of the policy in this article uses the definition of policy by Chen Zhenming (Zhen-ming Chen 2003), that is, "policy is the political act or regulation adopted by state agencies, political parties, and other political groups to achieve or serve certain social, political, economic, and cultural goals in a given period of time. The code of conduct is a general term for a series of strategies, decrees, measures, methods, methods, regulations, etc." The doctoral enrollment policies mentioned in this article is in the form of various laws&regulations, and administrative rules and working documents. In terms of hierarchy, they refer specifically to policies of doctoral candidates' enrollment at the national level and specifically to the relevant government agencies in the mainland of China in terms of the policy-issuing agencies.

Doctoral candidates' enrollment in China can be traced back to the Republic of China at the earliest, but in the modern sense, doctoral candidates' enrollment began after the "Cultural Revolution." Regulations of the People's Republic of China on the adoption of the thirteenth meeting of the Standing Committee of the Fifth National People's Congress on February 12, 1980 and the State Council's approval of the "Provisional Measures for the Implementation of the Regulations of the People's Republic of China on May 20, 1981" marked the birth of doctoral education in China. The "Notice on Doing a Ph.D. Graduate Student Enrollment Job in 1981" promulgated by the Ministry of Education on November 23, 1981 is China's first doctoral candidates' enrollment policy document, marking the beginning of doctoral candidates' enrollment in China. Since then, doctoral candidates' enrollment has continued as a routine work of our country's higher education. Therefore, this study

sets the policy selection origin to 1981 when the first doctoral candidates' enrollment notice was issued in China, ending in 2017. The selection of doctoral candidates for admission policy literatures follows three principles. Firstly, the literatures are closely related to doctoral enrollment. Secondly, the documents are all national policy documents. Thirdly, the documents are consistent with laws&regulations, administrative rules and working papers. Through the official website of the Ministry of Education, *Selected National Graduate Enrollment Work Documents from 1977 to 2003* (Ministry of Education College Student Division 2004), *The Policy and Practice of Postgraduate Enrollment during the Tenth Five-year Plan Period* (Ministry of Education College Student Division 2006), *Doctoral Education Development Instruction Manual* (Jian-min Guo 2008), *History of graduate education and degree system in the People's Republic of China* (Zhen-rou Wu et al. 2001) and other media are inquired, we sorted out 177 copies finally. (see Table 1)

Table 1. Doctoral Enrollment Policy Documents at the National Level

No.	Policy	Year	Issue
1	Notice about enrolling doctoral candidates of 1981	1981	Jiao Gao Er Zi 037
2	Interim Provisions on enrolling doctoral candidates	1982	Jiao Gao Er Zi 032
3	Notice about making plan for enrolling doctoral candidates of 1982	1982	Jiao Gao Er Zi 007
4	Notice about making plan for enrolling doctoral candidates of 1983	1983	Jiao Yan Si Zi 003
5	Notice about transferring plan for enrolling doctoral candidates of 1984	1984	Jiao Yan Zi 019
6	Notice about master's candidates working on doctoral degree in advance	1984	Jiao Yan Zi 054
7	Notice about transferring plan for enrolling doctoral candidates of 1985	1985	Jiao Yan Zi 013
8	Notice about making plan for enrolling doctoral candidates of 1985	1985	Jiao Yan Si Zi 002
...	.....	.....	.....
176	Notice about enrolling doctoral candidates of 2017	2017	Jiao Xue Ting (2017)2
177	Some Opinions on deepening integration of production and education	2017	Guo Ban Fa (2017)95

### 3. An Analytical Framework for the Policy Bibliometric Analysis

#### 3.1 Time Dimension Analysis

In the time dimension, the policy literature is more pluralistic than other document types. It could include various directions such as “grant time”, “expiration time”, “effective time” and “time segment division”. This article mainly studies the quantity and changes of the doctoral candidates' enrollment policy literatures from their grant time and time segment division.

#### 3.2 Policy-issuing Agency

Since the founding of the People's Republic of China, the government agencies have undergone several changes, at time same time, the issuing organizations of policy documents were renamed as well. The doctoral candidates' enrollment policy samples in this paper concern with 21 government agencies. Eight of them have been renamed in 1981-2017 (see Table 2). In the presentation of the chart, in order to show more micro-display of the implementation status of the enacting body, the article did not classify the Department of the Ministry of Education into the Ministry of Education .What's more, the organizations before the renaming are not merged into a mechanism with the renamed institution when taking the historical change of the institution into account. But it is in a reversed treatment method when it refers to statistical analysis. Because the data should be treated scientifically.

There exists bureaucracy and network relationship in the government agencies who making policies. Whereas the samples in this paper are at the national level, bureaucracy is not so obvious. Therefore , this article mainly studies the cooperative relationship among the network relations of the government agencies.

Table 2. the Reform Course of Government Agencies Who Making Doctoral Candidates' Enrollment Policies

Organization's Name	Reform Course
Ministry of Education National Education Council	It is called Ministry of Education from 1981 to June 1985. It is called National Education Council from June 1985 to March 1998. State Language Commission was classified into National Education Council in March 1998. National Education Council renamed Ministry of Education until now.
State Planning Commission State Development Planning Commission Development and Reform Commission	State Planning Commission was established in 1952. It was renamed State Development Planning Commission in 1998. State Council Office for Restructuring The Economic Systems and some functions of State Commission for Economics and Trade were integrated into State Development Planning Commission in 2003, thus, it was renamed Development and Reform Commission.
Ministry of Personnel	It was established in 1980. It was renamed Ministry of Human Resources and Social Security in March 2008.
The Commission of Science	It was established in May 1982. It was cancelled in March 2008.
Ministry of Health	It was established in 1998. It was renamed National Health and Family Planning Commission in 2013.

### 3.3 Policy Document Type

It is necessary to discern the features and attributes of policy documents in policy quantitative research, which is helpful to reveal the deep meaning and content of policy documents. According to different dimensions, policies can be divided into several types. When it refers to doctoral candidates' enrollment policies, it usually includes education laws, educational administrative rules and working documents.

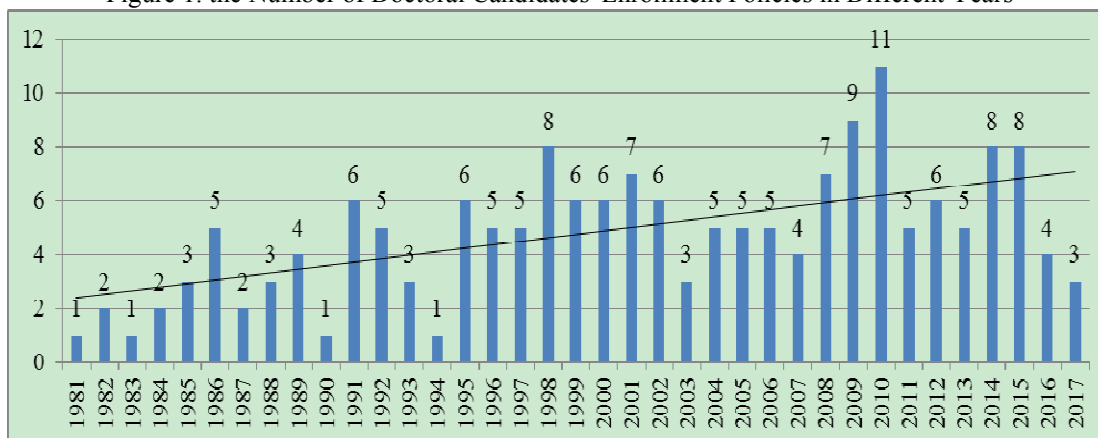
Education laws belong to the administrative law. There are eight education laws right now, including one basic law and seven ordinary laws (Chong-long Yang 2008). Regulations have broad and narrow sense. Narrow regulations are divided into administrative regulations and local regulations. The article is only talking about the former, which is manifested as ordinance in practice. Laws and regulations are commonly used in combination. Educational administrative rules can be divided into departmental rules and local regulations generally, and this article is only talking about the former which include stipulation and measure promulgated by The Ministry of Education (the National Education Commission) jointly or respectively. Other education policy documents are named working documents in the official website of the government, which are equated with official documents of the Party and government organizations. According to *Regulations on Handling Official Documents of the Party and Government Organizations*, there are 15 kinds of working documents, including order, decision, announcement, circular, notification, aviso, bill, report, instruction, reply, comment, letter, summary, bulletin and resolution, etc. According to the above definitions and regulations, the policy documents are divided into three categories: laws&regulations, administrative rules and working documents.

## 4. A Bibliometric Analysis of Doctoral Candidates' Enrollment Policies

### 4.1 Analysis of Policy Promulgation Time

According to the statistics of the number of doctoral candidates' enrollment policies over the past years, it is found that the annual doctoral candidates' enrollment policies have an increasing trend (see Fig. 1), which means the country has strengthened the regulation of doctoral candidates' enrollment activities over time.

Figure 1. the Number of Doctoral Candidates' Enrollment Policies in Different Years



In favor of comparing policy tools used in doctoral candidates' enrollment in different ages and the change of the work focus, what's more, to ensure the similar span of each time period as far as possible, the course of doctoral candidates' enrollment was divided into four periods: the 1980s (1981-1989), the 1990s (1990-1999), the early 21st century (2000-2009) and the 2010s (2010-2017).

In the 1980's (see Table 3), owing to the beginning of doctoral candidates' enrollment, the total amount of doctoral candidates' enrollment policies was relatively small, which was 23. In the 1990s, based on the early years practice and a great deal of experience, there was a rapid increase in the number of doctoral candidates' enrollment policies with the rapid development of doctoral candidates' enrollment cause, which is twice as large as the 1980s. At the beginning of the 21st century, because of the further development of doctoral candidates' enrollment cause, the number of policies has increased, but the pace of growth has declined. In the 2010s, the number of doctoral candidates' enrollment policies has declined.

Table 3. Statistics on the Number of Doctoral Candidates' Enrollment Policies in Different Times

<b>Times</b>	<b>Total</b>
1980s	23
1990s	46
Early 21st century	58
2010s	50

#### *4.2 Analysis of Policy-issuing Agencies*

This paper analyzes the issuing organizations of the doctoral enrollment policy literatures in China through the issuing agencies, the frequency of policies which were released by single agency and the frequency of policies which were released by multiple agencies. By the analysis of the issuing agencies, the status and role of each promulgating agency in the literature on the enrollment policies for doctoral candidates in China are studied; by the analysis of the frequency of policies which were released by single agency or multiple agencies, the cooperation between the various promulgating agencies and their status in the cooperation are studied. As shown in Table 4, China's doctoral enrollment policies involve 21 promulgation agencies, including the National Education Commission, the Ministry of Education, and the the departments of Ministry of Education as the competent institutions for the enrollment of Ph.D, with the highest number of policies issued. The number of policies which were released by the 7 agencies is 165, about 67.62% of the total issued volume. A total of 68 documents were issued jointly by 7 agencies, which accounted for 41.21% of the total issued by 7 agencies. The total number of documents issued by the National Planning Commission, the National Development Planning Commission, and the National Development and Reform Commission was 39, which ranked second, accounting for 15.98% of the total issued documents. The volume of documents jointly issued by the 3 agencies accounted for 100% of the volume of documents issued by the three agencies, which was related to the auxiliary status of the three institutions in the enrollment of doctoral candidates. The total number of documents issued by the other 11 agencies was 40, which accounted for approximately 16.39% of the total issued documents. The percentage of each agency's issued documents was less than 10%. Except for the personnel department, the amount of documents issued by each agency was less than or equal to 5 copies. Among them, three agencies jointly issued a document with a ratio of 100%, and five organizations issued a document with a total of 0.

Table 4. Statistics of the Promulgating Institutions for Doctoral Candidate Admission Policies

No.	Department	Total	Ratio	Joint Mandate	Ratio	Sole Mandate	Ratio
1	Ministry of Education	65	26.64%	21	32.31%	44	67.69%
2	National Education Council	47	19.26%	21	44.68%	26	55.32%
3	General Office of State Educational Committee	2	0.82%	0	0.00%	2	100.00%
4	General Office of MOE	27	11.07%	26	96.30%	1	3.70%
5	College & University Students Department of MOE	16	6.56%	0	0.00%	16	100.00%
6	Political & Ideological Education Department	6	2.46%	0	0.00%	6	100.00%
7	Degree Administration & Postgraduate Education Department of MOE	2	0.82%	0	0.00%	2	100.00%
8	Development and Reform Commission	11	4.51%	11	100.00%	0	0.00%
9	State Planning Commission	19	7.79%	19	100.00%	0	0.00%
10	State Development Planning Commission	9	3.69%	9	100.00%	0	0.00%
11	Ministry of Personnel	21	8.61%	21	100.00%	0	0.00%
12	Academic Degrees Committee of the State Council	5	2.05%	4	80.00%	1	20.00%
13	Standing Committee of the National People's Congress	4	1.64%	0	0.00%	4	100.00%
14	CPC Central Committee	2	0.82%	1	50.00%	1	50.00%
15	State Council	2	0.82%	1	50.00%	1	50.00%
16	The Commission of Science	1	0.41%	0	0.00%	1	100.00%
17	The Leading Group of Chinese Educational System Reform	1	0.41%	0	0.00%	1	100.00%
18	General Office of the State Council	1	0.41%	0	0.00%	1	100.00%
19	National People's Congress	1	0.41%	0	0.00%	1	100.00%
20	Ministry of Finance	1	0.41%	1	100.00%	0	0.00%
21	Ministry of Health	1	0.41%	1	100.00%	0	0.00%

#### 4.3 Analysis of Policy Document Type

As can be seen from Table 5, there are 163 copies of working documents of all the 177 doctoral enrollment policy documents, which account for 92.09%. The remaining 7.9% are occupied by laws&regulations and administrative rules, which account for 2.82% and 5.08%, respectively.

According to times analysis, laws&regulations were almost missing in the 1980s, and administrative rules accounted for a relatively small proportion. In other words, the doctoral enrollment was mainly based on the relevant provisions of the working documents and a few administrative rules during that period. In the 1990s, with the enactment of the Education Law of the People's Republic of China and the Higher Education Law of the People's Republic of China, doctoral enrollment began a new era of law-based enrollment. As a result, the number of working documents has been increasing with the development of doctoral enrollment. At the beginning of the 21st century, in order to adapt to the development of the times, the Education Law of the People's Republic of China was amended in 2009. As time goes, the number of administrative rules increased slightly, while the number of working documents has reached the peak. In the 2010s, the *Education Law of the People's Republic of China* and the *Higher Education Law of the People's Republic of China* were amended in 2015, along with the release of *Measures of National Doctoral enrollment in 2010* and *Measures of Doctoral enrollment in 2014*, administrative rules made the doctoral enrollment more and more standardized. Therefore, the number of administrative rules has increased and the number of working documents was reduced.

Table 5. Statistics on Policy Documents Types of Doctoral Enrollment

Times	Laws and Regulations	Administrative Rules	Working Documents
The 1980s	0	2	21
The 1990s	2	0	44
Early 21st century	1	3	53
The 2010s	2	4	44
Total	5	9	163
Accounting	2.82%	5.08 %	92.09%

## 5. Conclusion and Discussion

### 5.1 Conclusion

#### 5.1.1 the Number of Doctoral Candidates' Enrollment Policies Shows a Descending Trend

Since China's first doctoral candidates' enrollment policy was promulgated, China has continued to broaden the scope, refine the relevant regulations and meet the real needs of the doctoral candidates' enrollment through the doctoral candidates' enrollment policy literatures. Judging from the total amount, as of 2017, the number of the relevant policy literatures for doctoral candidates' enrollment in China has reached 177, which has played an irreplaceable role in ensuring the stable running of the work for the doctoral candidates' enrollment in China. From the perspective of time dimension, doctoral candidates' enrollment policies in our country have continued to increase during the first three periods, with a slight decreased in the fourth period.

#### 5.1.2 Working Documents Ranks First in the Type of Doctoral Candidates' Enrollment Policies

After 37 years of development, the policy system for the doctoral candidates' enrollment in China has preliminarily formed, with a variety of policy types including laws&regulations, administrative rules and working documents and so on. In terms of total amount, the working documents account for about 92.09% of all doctoral candidates' enrollment policy documents; laws&regulations and administrative rules only account for 7.91%. Combined with the time dimension, although the working documents have decreased in the process of time, the gap between the number of laws&regulations and administrative rules is still large.

#### 5.1.3 the Ministry of Education and Related Institutions are the Main Body of Institutions that Promulgated Doctoral Candidates' Enrollment Policies

In the 21 institutions that join in the promulgation of the doctoral candidates' enrollment policies, the National Education Commission, the Ministry of Education and its constituent mechanisms are the competent organization for doctoral candidates' enrollment, and the number of documents issued of them is the highest. Among the 177 doctoral enrollment policy documents, 165 were promulgated by them, accounting for about 67.62% of the total issued volume, of which the number of documents that 7 institutions jointly issued account for about half of the total promulgated by 7 institutions. The number of documents that The State Planning Commission, the National Development Planning Commission, and the National Development and Reform Commission issued was 39, ranking the second and accounting for approximately 15.98% of the total documents. There are 39 documents were all issued jointly. The other 12 institutions have a small amount of documents, 40 in total, accounting for about 16.39% of the total number of documents that issued, of which three institutions are all the documents for the joint issuance, The combined number of the five institutions is 0.

### 5.2 Discussion

The number of doctoral candidates' enrollment policies declined during the fourth stage may have the following reasons: First, after 37 years of development, doctoral candidates' enrollment in China has entered a stable development period, and the enrollment fields and enrollment range are relatively stable.

Second, under the background of streamlining administration and delegating power, the state has strengthened the management of doctoral candidates' enrollment work through laws&regulations and administrative rules. This is also one of the reasons that the laws&regulations and administrative rules of doctoral candidates' enrollment policy documents increased in the fourth period.

The number of working documents ranks first at all policy types at different time periods may be related with the nature of the work for the doctoral candidates' enrollment. Doctoral candidates' enrollment is a branch of higher education enrollment. As a regular job of the education department in the past years, it is more reasonable to enact the enrollment plan of the past years through the type of working documents.

Policy-issuing agencies of doctoral candidates' enrollment involve a number of institutions, of which the Ministry of Education and its related departments are the subject of policy-issuing agencies in China, and they are also the institutions that with the highest number of joint document. This is related to the nature of doctoral candidates' enrollment.

### *5.3 Limitation of Research*

In order to make the research more scientific and comprehensively reflect the characteristics of all aspects of doctoral candidates' enrollment policies in China, doctoral candidates' enrollment policies collected in this paper are throughout all the years, from the first doctoral candidates' enrollment policy at national level to 2017. However, some documents cannot be found due to underdeveloped information technology in China in the early years and no electronic management, or because the documents management consciousness is not so high, or because the content is inconvenient for public. Although the author has tried all kinds of methods, not only from the official website of the department, books and other media access to obtain the doctoral students admission policy documents, but also send e-mail to the Ministry of Education for help. Even so, it is difficult to ensure that the collected doctoral candidates' enrollment policies are thorough.

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