

# *The Tool Preference and Optimization Path of Teacher Education Policy: Content Analysis Based on 25 Policy Texts*

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**Keywords:** Teacher education policy, Policy tool, Content analysis method.

**Abstract:** The achievement of teacher education policy goals is inseparable from the scientific selection and rational use of policy tools. This research is based on the perspective of policy tools, with the help of content analysis, according to sample selection, constructing a two-dimensional analysis framework, text analysis unit and data analysis logic for teacher education policy, and analyzes the policy tool preferences and laws in 25 teacher education policy texts. This study found that there are obvious differences and unbalanced characteristics in teacher education policy tools used in teacher education; command tools and capacity building tools are "simple" and diverse, and lower-level tools are insufficient; policy tools are biased towards long-term construction and ignore short-term planning; The lack of systemic transformative tools, and the lack of a scientific combination of policy tools. Propose balanced teacher education policy tools; optimize the combination of policy tools; increase incentive tools and system transformational tools; actively introduce voluntary tools to achieve the corresponding optimization path of teacher education governance with the participation of multiple subjects.

## **1. Introduction**

In May 2001, the "Decision of the State Council on the Reform and Development of Basic Education" proposed that "cultivating and training an open teacher education system." This is the first time that the concept of "teacher education" has officially appeared in the national education policy text. Teacher education is important Sex has been raised to unprecedented heights. In the process of perfecting the teacher replenishment mechanism, the school's school-running conditions, and the gradual ample investment in education, the improvement of the overall quality of teachers has become an important topic for the development of the teaching team. Since 2001, my country has promulgated a series of teacher education policies, the teacher education system has been continuously improved, and the research on teacher education policies has also made great progress [1]. Teachers are the main

force in the development of education and the dream builders who create the "Chinese Dream". In the long term, teacher education policies will still be an important basis for promoting the professional development of teachers, and they need to be continuously improved. In recent years, teacher education policy research has mainly focused on the value orientation research of teacher education policy, the enlightenment research of foreign teacher education policy, and the process of teacher education policy [2]. Less attention has been paid to the analysis of teacher education policy texts, and there are few systematic analysis of the whole and structure of teacher education policy texts from the perspective of policy tools. Based on this, the research adopts the content analysis method, Based on the perspective of policy tools, according to sample selection, constructing a two-dimensional analysis framework of teacher education policy, text analysis unit and data analysis logic, analyze the policy tool preferences and laws in 25 teacher education policy texts. Selecting 25 teacher education policy texts promulgated by the central government and the Ministry of Education since 2001, and constructing a two-dimensional analysis framework of "teacher education policy" from the perspective of policy tools. Text encoding and data analysis visually present the rules and characteristics of the selection of teacher education policy tools in our country, and propose corresponding optimization strategies.

## 2. Theoretical basis

Policy tools are the means and ways for the government to achieve policy goals. Policy tools can well analyze the development and focus of a class of policies. Through the analysis of the policy text, we can understand the development history of such documents, and put forward problems and countermeasures in combination with the actual situation. Different scholars have different standards for the classification of policy tools. The first attempt to classify policy tools was the Dutch economist Kirschen E.S. He sorted out 64 general policy tools, but did not classify them systematically [3]. Savas specifically divides policy tools into government services, intergovernmental agreements, contracts, franchise operations, subsidies, markets and other types [4]. Most of the existing literature on education policy tools in China is based on the following classifications: McDonnell & Elmore's classification standard, which divides policy tools into command tools, incentive tools, capacity building tools, and system change tools [5]. This kind of policy tools are used more frequently, such as research on my country's higher education quality assurance policy, the policy of "dual teacher" teachers, and my country's ethnic education policy. Ingram & Schneider divided policy tools into authoritative tools, incentive tools, capacity building tools, symbolic and advisory tools, and learning tools [6]. This type of policy tool is also relatively common in the analysis and application of domestic policy literature. For example, it is used in the policy of exploring the sharing of public funds for the compulsory education of migrant children and the study of my country's higher education policy. There are also some studies that combine these two policy tools, such as studying the characteristics of the allocation and combination of ethnic minority bilingual policies and the text measurement study of my country's burden reduction policy. Howlett & Ramesh divided policy tools into three types: voluntary tools, mandatory tools, and hybrid tools [7]. These types of tools are also mentioned in the domestic literature. Rothwell & Zegvelad divided policy tools into three types of policy tools: supply-based, environmental-based, and demand-based [8]. It can be seen that there are many types of tools used for policy analysis, and various policy tools have been successfully applied. This not only

provides the policy text analysis methods and ideas that can be used for reference in this study, but also makes this study confused in the selection of policy tools in the policy study.

“Workers must first sharpen their tools if they want to do their jobs well.” The key to the implementation of teacher education policy goals is the policy tool. In 1987, MacDonald and Elmore mainly discussed the mechanism of transforming policy objectives into specific actions, dividing policy tools into command tools, incentive tools, capacity building tools, and system change tools [5]. During the same period, Schneider and Ingram believed that policy tools always tried to make people do things that they would not do under other circumstances. They divided policy tools into authoritative tools, incentive tools, capacity building tools, symbols and advice tools, and learning tools [6]. Among them, the command tool is Compulsive normative rules, incentive tools are oriented rewards Guide, capacity building tool is a long-term human resource reserve, and the tool of exhortation is an argumentative value signal, while the tool of institutional change is It is a systematic transfer of rights. In the process of formulating policy text. Although the selection and use of policy tools have specific circumstances Environment, but it often depends on the characteristics of policy tools, policy objectives, and objectives. The comprehensive operation of influencing factors such as target groups, executive bodies, policy environment, etc.

As a special type of policy tools, teacher education policy tools refer to various means or methods adopted by policy subjects to solve specific teacher education problems or to achieve certain teacher education development goals. The classification of policy tools by MacDonald et al. focuses on policy implementation entities and policy implementation entities to a large extent. According to their policy tool classification logic, they start from command tools, incentive tools, capacity-building tools, and system transformational tools. And the five major policy tools of symbolic and persuasive in-depth study of teacher education policy.

### **3. Research methods and sample selection**

#### **3.1 Research method**

The content analysis method is to infer effective data through the information contained in the document content, and was first used in the field of communication. American communication scientist Bernard Berelson defines it as a research method that objectively, systematically and quantitatively describes the obvious content of communication. The content analysis method specifically includes six steps: First, ask questions. Second, take literature samples. Sampling generally includes source sampling, date sampling, and unit sampling. Third, determine the analysis unit, which can be a word, symbol, phrase, sentence, or paragraph. Fourth, to formulate analysis categories, each analysis category must be independent and mutually exclusive. Fifth, content coding and statistics. Sixth, interpretation and testing, mainly to test the reliability and validity of the research [9]. The advantage is that the researcher strictly follows the research steps and research procedures for statistical comparison, and there is no mutual interference between the researcher and the researchee, and there is no subject effect. In addition, the researcher compares the data horizontally and vertically according to the research objectives. This kind of quantitative analysis on a qualitative basis can get more accurate and scientific research conclusions. Therefore, the content analysis method guarantees the objectivity of the research process and research conclusions, and is an objective and systematic quantitative analysis of the content [10].

This research is based on the steps, procedures, and requirements of content analysis. The basic logic is to first select the teacher education policy texts issued by China since 2001 as the analysis sample, construct a two-dimensional distribution framework based on policy theories, and then analyze the policy tools of each policy text. The code defines the analysis unit and evaluation criteria, converts the non-quantitative content of the policy tool into quantitative data, and then incorporates the policy code into the two-dimensional analysis framework to count the frequency and percentage. Finally, the reliability and validity of the statistical results are tested to ensure the research. On the basis of the analysis results, it is found that teachers' education policy tools are used regularly to give corresponding policy recommendations.

### **3.2 Sample selection**

The "Decision of the State Council on the Reform and Development of Basic Education" promulgated in 2001 formally appeared for the first time in the selection of policy texts starting from "teacher education". The time span is from January 2001 to December 2020. The selected documents on basic teacher education policies mainly come from the website of the Ministry of Education and the website of the Chinese government. The main selection criteria are: first, the release date is all policy texts after 2001; second, the policy issuance units are the central government and the Ministry of Education; third, the content of the policy involves information related to basic teacher education. In order to ensure the representativeness and pertinence of the policy text, the research mainly focuses on the three major policy texts of pre-employment training, qualification recognition and on-the-job training. At the same time, considering the authority and effectiveness of the selected policy texts, the main focus is on a series of central government documents published on the official website of the Ministry of Education. The issuing agencies include the Central Committee of the Communist Party of China, the State Council, the Ministry of Education and the General Office of the State Council. Finally, 25 policy documents were screened and sorted out, including 1 decision, 11 opinions, 7 notifications, 3 plans, 1 outline, and 2 plans.

## **4. Analysis framework: two-dimensional analysis framework of teacher education policy**

The key to scientifically grasping the rules and overall characteristics of the use of teacher education policy tools lies in the establishment of a theoretical framework and reference standards. The research combines teacher education policy tools and teacher education links to establish a two-dimensional analysis framework for teacher education policy tools, so as to encode and quantitatively analyze the policy text. The X dimension represents teacher education policy tools, which are divided into command tools, incentive tools, capacity building tools, system transformative tools, and symbolic and persuasive tools. The Y dimension represents teacher education, which is divided into pre-service training, qualification recognition and on-the-job training.

### **4.1 X dimension: teacher education policy tool dimension**

The implementation of teacher education policy involves multiple policy subjects, and the selection and use of policy tools need to consider the logic of the policy subjects' behavior and the degree to which the policy objectives are achieved. Therefore, the teacher education policy tools are

divided into command tools, incentive tools, capacity building tools, system transformative tools, and symbolic and persuasive tools.

Mandatory policy tools aim to regulate the rules of the behavior of individuals and institutions, which are manifested in the direct force of the state or the government on teacher education, and have an effect on teacher education through mandatory regulations or means [6]. The study incorporates order execution, standards, requirements, and government purchases into the category of mandatory policy tools.

Incentive policy tools are designed to enable individuals and institutions to exchange specific actions for economic returns, which are manifested in the state or government's interest temptation of policy implementation subjects, allowing them to obtain short-term returns of material rewards [5]. Incentive policy tools are mainly used for teachers who voluntarily engage in education and reward policies for outstanding teachers in primary and secondary schools. The research is subdivided into rewards and evaluations.

The capacity-building policy tool aims to enable the society to obtain information and human resources through the investment of funds, and to enable individuals to obtain material and intellectual returns [5]. It is manifested by the state or the government's binding of interests and the long-term development of personal and social interests by providing funds, information or resources. The research incorporates infrastructure, resource sharing, consulting services, policy preferences, education and learning, and system construction [11].

System transformation is aimed at the adjustment of authority and the change of mechanism. It is manifested in that the state or government uses authority to allocate and transfer between different individuals and institutions. The change of authority brings about a change in resource allocation and thus changes the public service delivery system. The systemic transformational policy tools are mainly aimed at the main body of policy implementation of teacher education policy, and the main performance is the adjustment of mechanism or function in the research.

Symbolic and advisory policy tools refer to the fact that the government decides whether to take specific policy actions that are consistent with the policy goals by providing relevant information to individuals or institutions based on their own values. Since whether to take action depends on the motivations of individuals and institutions, the government often encourages and calls on them to guide them.

#### **4.2 Y dimension: the dimension of teacher education policy links**

Teacher education mainly includes three links: pre-service training, qualification recognition and on-the-job training. Among them, the teacher training method is mainly teacher education; teacher qualification certification mainly includes teacher qualification classification and application scope, teacher qualification examination, teacher qualification certificate, etc.; teacher training mainly refers to teachers' post-service training and continuing education [12]. Based on the three links of teacher education and the five major teacher education policy tools, a two-dimensional analysis framework of teacher education policy is established. As shown in Figure 1.

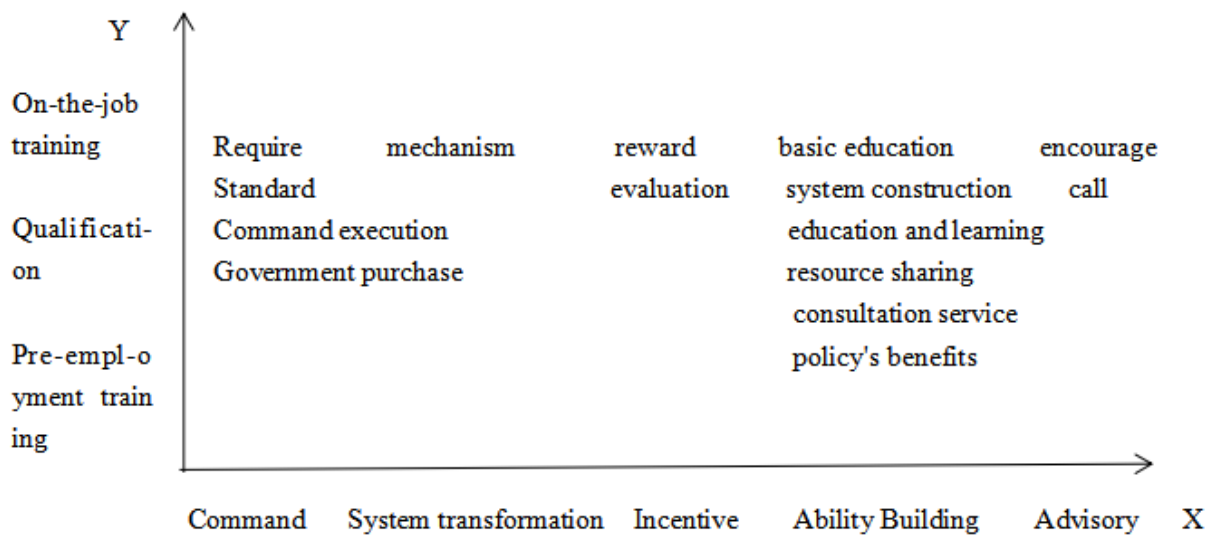


Figure 1: Two-dimensional analysis framework of teacher education policy

## 5. Text unit coding and data analysis

### 5.1 Text unit coding

In the content analysis method, the relevant provisions of teacher education in the content of the policy text are the analysis units in the two-dimensional analysis framework. First, encode the content of the 25 selected teacher education policy texts in the format of “Policy Number-Related Clauses-Chapters”, and then embed these policy texts in the two-dimensional analysis framework of teacher education policies for classification, and finally The coding table of the content analysis unit is formed. As shown in Table 1. The table arranges the relevant policy text units according to the year of publication. The table information includes “serial number”, “document name”, “policy content analysis unit” and “content coding”. The policy text is divided into 5 units according to the policy theme, each unit Arranged in descending order of year and numbered according to the format of “Policy Number—Teacher Education Link—Policy Tool Type”. For example, “24-1-1” is the 25th policy text—previous training link—mandatory tool. In the "Decision of the State Council on the Reform and Development of Basic Education", there are two sentences related to “pre-service teacher ability training”. Therefore, the number“1-1-2”is a capacity building tool based on semantic analysis. In order to ensure the consistency and reliability of the text coding, the method of independent coding and summary discussion by two people is adopted, and the coding of all policy text information is completed after consensus.

Table 1: Coding of policy text content analysis unit (excerpt)

Serial number	Policy name	Teacher Education Policy Content Analysis Unit	coding
1	Decision of the State Council on the Reform and Development of Basic Education	Strengthen the discipline construction of normal colleges and universities, and encourage comprehensive universities and other non-normal colleges and universities to organize education departments or courses required to obtain teacher qualifications. Support the construction of normal universities in the western region. Relying on qualified normal universities and comprehensive universities to build a number of open teacher education network colleges.	1-1-2
2	Decision of the State Council on the Reform and Development of Basic Education	Areas with conditions should train elementary school teachers and junior high school teachers with a college degree, gradually improve the academic qualifications of high school teachers, and expand the scale of training and enrollment of masters of education.	1-1-1
.....	.....	.....	.....
168	Teacher Education Revitalization Action Plan (2018-2022)	It is necessary to increase the investment in teacher education financial funds and improve the level of teacher education security. In accordance with the development of teacher education and financial resources, the standard of funding per student for normal students should be raised in a timely manner. Teacher training funds should be included in the financial budget. Kindergartens, primary and secondary schools, and secondary vocational schools arrange teacher training funds at 5% of the total annual public budget.	25-3-1

Note: (coding rules: 1. Policy number-teacher education link number-policy tool type. 2. Teacher education link: 1=pre-employment training; 2=qualification; 3=on-the-job training. 3. Policy tool type: 1= Command tools; 2=capacity-building tools; 3=incentive tools; 4=system transformative tools; 5=symbolic and advisory tools. 4. Example: "24-1-1" 25th policy text-before Training link-command tool.)

## 5.2 Data analysis

### 5.2.1 Analysis of Teacher Education Links

In the pre-employment training link, there are obvious differences in the use of policy tools. Command tools are used most frequently (47.69%), followed by capacity-building tools (35.38%), symbolic and persuasive tools and system transformative tools are the same (6.15%), and incentive tools are the least (4.61%). In the qualification process, symbolic and persuasive tools (15.38%) rank second, imperative tools (73.08%) are approximately five times as large as symbolic and persuasive tools, and three are capacity-building tools, systemic transformative tools, and motivational tools. Were the same (3.85%). In the on-the-job training link, the use of policy tools is relatively balanced, but there are still significant differences. Capacity-building tools accounted for 45.56%, and command tools (41.11%) were very small. Systemic transformative and incentive tools were 7.78%

and 3.33%, respectively. Symbolic and persuasive tools were used the least (2.22%). As shown in table 2.

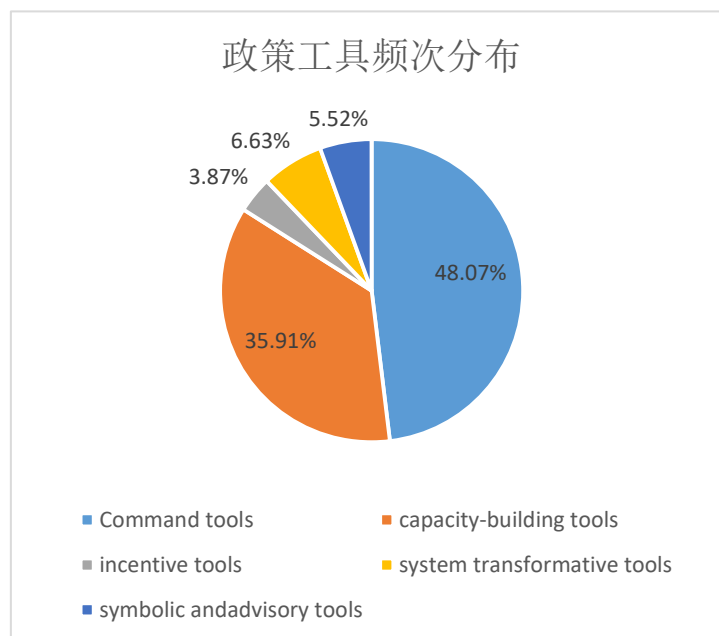
*Table 2: Frequency distribution of teacher education policy tool selection*

Dimension	1.1	1.2	1.3	1.4	2.1	2.2	2.3	2.4	2.5	2.6	3.1	3.2	4.1	5.1	5.2	Sum (%)
Pre-empl-oymnt training	4	1	26	0	1	5	10	3	2	2	3	0	4	1	3	35.91
Qualificati-on	8	3	8	0	0	0	1	0	0	0	0	1	1	2	2	14.36
On-the-job training	7	9	19	2	0	7	30	4	0	0	2	1	7	1	1	49.72

Note:(Policy tool type: 1=Command tools,1.1=Require;1.2=Standard;1.3=Command execution;1.4=Government purchase.2=capacity-building tools,2.1=basic education;2.2=system construction;2.3=education and learning;2.4=resource sharing;2.5=consultation service;2.6=policy's benefits.3=incentive tools,3.1=reward;3.2=evaluation.4=system transformative tools,4.1=mechanism. 5=symbolic andadvisory tools, 5.1=encourage; 5.2=call)

### 5.2.2 Analysis of basic policy tools

From the perspective of the five types of teacher education policy tools, the frequency of occurrence of policy tools is 181 according to the relevant provisions. Among them, imperative tools are used most frequently, reaching 48.07%; the gap between capacity-building tools and imperative tools is relatively small, accounting for 35.91%; system transformative tools rank third (6.63%); symbolic and persuasive tools follow closely. The last (5.52%); the last is an incentive tool, accounting for only 3.87%. as shown in picture 2.



*Figure 2: Frequency distribution of five types of teacher education policy tools*



Specific to each teacher education policy tool type. Among the command tools, the required usage rate reached 60.92%, which is more than half; followed by order execution (21.84%) and standard (14.94%); the least is government purchase (2.30%). It can be seen from this that, based on the mandatory and operability characteristics of imperative tools, the government mainly chooses imperative policy tools to solve the specific problems of teacher education. Among the incentive tools, the reward ratio is as high as 71.43%, and the evaluation is the lowest (28.57%). Among the capacity-building tools, the proportion of education and learning is the highest (63.08%), followed by system construction (18.46%) and resource sharing (10.77%), consulting services and policy preferences are the same (3.08%), and finally infrastructure (1.54%). Among the symbolic and persuasive tools, encouragement is relatively small (40.00%), and the call-to-call ratio reaches 60.00%.

## 6. Research conclusions and policy recommendations

### 6.1 Research conclusion

#### *6.1.1 There are obvious differences and unbalanced characteristics in the application of policy tools to teacher education*

It can be seen from Table 2 that there are obvious differences in the application of policy tools to teacher education. The utilization rate of policy tools in on-the-job training is 49.72%, accounting for nearly half, while the policy tools for pre-employment training and qualification certification are 35.91% and 14.36% respectively.

In the pre-employment training link, command tools are used most frequently (47.69%), followed by capacity-building tools (35.38%), symbolic and advisory tools (6.15%), systemic transformative tools (6.15%), and motivational tools. Tools (4.61%). The highest frequency of use of command tools indicates that policy makers tend to use compulsory and authoritative methods to control and manage the government, colleges and universities and students, so as to improve the efficiency of teacher education. For example, in the 2018“Measures for the Implementation of Public Education for Normal Students Directly Under the Ministry of Education”, in order to ensure that publicly-funded teacher students agree to use more mandatory tools, including penalties for breach of contract, etc. In addition, the "Implementation Measures" uses a capacity-building tool for publicly-funded normal students who have passed the assessment after two years of work and can be admitted as postgraduates with a master's degree in education. The adoption of capacity-building tools by policy makers and the human capital investment of masters and students is a manifestation of “future strengthening of human resources such as knowledge, technology and capabilities, and long-term returns” [13].

In the qualification process, imperative tools accounted for the highest proportion of 73.08%, followed by symbolic and advisory tools accounted for 15.38%, and capacity-building tools, incentive tools and system change tools were all 3.85%. According to statistical analysis, it can be seen that in the entire process of teacher education, there are fewer qualification accreditation policies than pre-service training and on-the-job training policies. Policy makers focus on selecting tools such as “command execution”, “requirements”, and “standards”, with the purpose of strengthening the specific implementation effects of policies by education administrative departments, all levels and types of schools, and the society.

In the on-the-job training session, the frequency of use of command tools and capacity building

tools was the same, 41.11% and 45.56% respectively, followed by system transformative tools with 7.78%, symbolic and persuasive tools with 2.22% and incentive tools with 3.33%. In order to improve the comprehensive literacy and professional level of in-service teachers, it is necessary to use capacity-building tools to improve teachers' education and teaching capabilities, so the use of capacity-building tools is relatively high. For example, in 2011, the frequency of use of the “Opinions of the Ministry of Education on Vigorously Strengthening the Training of Primary and Secondary School Teachers” was 8. When more capacity-building tools are used, policy makers will also choose imperative tools to ensure the perfection of the training system and training system.

Imperative tools are the best choice to consider policy costs and implementation effects, but less use of symbolic and persuasive tools and incentive tools will result in the lack of internal motivation for policy action subjects (including governments, schools, teachers, and teachers). The recognition of policy goals and the sense of participation in policy implementation are relatively low. Capacity-building tools take into account long-term construction and interests, and are not in a hurry for short-term achievements, and can solve specific teacher education problems. However, the insufficient use of systemic transformative tools is not conducive to re-adjusting the functions of teacher education organizations and allocating the power of relevant stakeholders, and is not conducive to the full implementation of specific policy measures. Therefore, the obvious difference and imbalance in the use of policy tools in teacher education can easily lead to an imbalance in the teacher education pattern, and finally lead to poor implementation of teacher education policies.

### *6.1.2 Command tools and capacity-building tools are “simple” and diverse, and the lower-level tools lack collaboration*

According to statistical analysis, imperative tools and capacity-building tools are among the top five teacher education policy tools with a ratio of 48.07% and 35.91%, respectively. Among the imperative tools, “command execution”, “standard”, “requirement” and “government purchase” are all used, but they show the characteristics of scattered and disorderly applications, which leads to the ineffective use of multiple lower-level tools. Among them, the "requirement" tool was used the most frequently, reaching 63.38%, and the “government purchase” tool was only 2.73%. For example, the “requirement” tool has been used 8 times in the “Opinions of the Ministry of Education on Strengthening the Practice of Teacher Education”. The effective regulation of teacher education through mandatory tools such as “requirements” is obviously insufficient, and systematic teacher education policies need to be further improved. Legal System. In addition, the relative lack of “government purchases” is not conducive to stimulating the enthusiasm of various policy subjects to provide teacher education services.

The capacity-building tools are mainly two lower-level tools, “education learning” and “system building”, accounting for 63.08% and 18.46% respectively. However, the utilization rate of “education learning” is 3.5 times that of “system building”. The lack of a path that combines power development and external system construction tends to fall into the vicious circle of “single-legged” walking, and it is difficult to promote the independent professional development of teachers. Tools such as resource sharing, consulting services, and policy preferences are insufficient and unscientific, and it is difficult to realize the transformation of the government's way of providing educational services from “supply-oriented” to “demand-driven”.

### *6.1.3 Policy tools are biased towards long-term construction, ignoring short-term planning*

The statistical analysis of teacher education policy tools reveals that the use rate of capacity-building tools is 5.4-9.3 times that of the other three policy tools except for command tools. The main reasons are as follows: First, it is based on the characteristics of capacity-building tools. This type of tool enhances policy implementation and construction capabilities by providing information, resources, and educational opportunities to those who lack policy implementation capabilities, and then pursues long-term policy effects [5]. Capacity-building tools such as system construction, education and learning, policy preferences, and consulting services are concrete manifestations in the field of teacher education. Second, it is related to the goal of teacher education policy. The key to teacher education is education, and the goal is to improve the level of teachers. This determines that policy makers follow a series of educational laws to formulate policy content, and then implement policy implementation, so as to solve the problems in teacher education and realize the integration of teacher education Target. Third, the compatibility of capacity-building tools with teacher education policies. The capacity-building tools focus on improving the comprehensive literacy and teaching level of teachers, and are highly consistent with the goals of teacher education policies. Therefore, the capacity-building tools in teacher education policies are fully used.

Although capacity-building is more concerned with the realization of long-term benefits, it is full of unknowns, uncertainties and multiple possibilities. Too much use of capacity-building tools to promote long-term construction can easily lead to neglect of short-term planning. From statistical analysis, it can be seen that incentive tools only account for 3.87%, which is the last. The short-term goal of teacher education policy is the prerequisite basis for the long-term goal, and the long-term goal is the ultimate pursuit of the short-term goal. The consistency and continuity of the two are the basis for the selection of policy tools to focus on long-term construction and short-term planning. To a certain extent, the neglect of incentive tools will cause the divergence of the action logic of the policy subject from the short-term policy objectives, which will lead to the deviation of the short-term policy objectives and the long-term policy objectives. Therefore, the capacity policy tools and incentive policy tools of teacher education policies should be closely integrated and coordinated with each other.

### *6.1.4 Lack of systemic transformative tools and lack of scientific combination of policy tools*

The background of the teacher education policy is to eliminate the problem of teacher education interruption caused by the long-term separation of training and training. Systemic transformative tools are playing a role in the process of integrating system resources, reforming mechanisms and systems, and realizing power reorganization to establish training and training integration. Critical use. Based on policy text research, it is found that the frequency and proportion of systemic transformational tools are too low, indicating that the current use of teacher education policy tools cannot fully serve the implementation of policy goals. Therefore, on the one hand, pay attention to the value of the system's transformative tools. By analyzing the teacher education policy environment, playing its role in organization, reform, and functional adjustment to solve teacher education problems and promote the improvement of teacher education practice. On the other hand, the achievement of policy goals is inseparable from the scientific combination and rational application of systemic transformative tools and other policy tools. MacDonald and Elmore's hypothesis on the classification of policy tools

pointed out: “Different policy tools are based on different assumptions, expected effects, costs, benefits, and shortcomings. Therefore, the optimal combination of policy tools is based on policy objectives and analyzes policies. Determined by resources and environment.” [5] In the policy texts, taking the “Outstanding Teacher Training Plan” as an example, the establishment of a social evaluation mechanism promotes education and teaching reform and innovation, but there is no clear definition of how to establish a mechanism and what mechanism to build. This ambiguity has to a certain extent caused the unity of policy tool selection, restricted the effectiveness of the use of policy tools, and hindered the rational combination and balanced use of policy tools.

## 6.2 Policy recommendations

Based on the analysis of the use of policy tools, the current combination of policy tools for teacher education in my country is relatively reasonable, but there are still areas that need to be improved and strengthened. To this end, the research puts forward the following policy recommendations to optimize the selection path of teacher education policy tools.

### 6.2.1 Balance teacher education policy tools to form policy synergy

Judging from the current teacher education policy, the use of policy tools generally focuses on pre-service training and on-the-job training, and the qualification verification link is relatively weak. Among them, command tools and capacity-building tools are mostly used, while motivational tools, systemic transformative tools, and symbolic and advisory tools are few. There is an imbalance in the use of teacher education policy tools. The following policy recommendations are put forward: First, increase the proportion of symbolic and advisory tools and incentive tools in the qualification process. Qualifications are closely integrated with on-the-job training, and the internal motivation of new teachers is mobilized through the use of motivational tools and symbolic and advisory tools, so that new teachers are willing to participate in on-the-job training, and continuously improve the level of education and teaching. The second is to consider the advantages and disadvantages of various policy tools and use them comprehensively. The selection of policy tools should take into account the inherent characteristics of the policy tools, the conditions of use of the policy tools, the evaluation of the performance of the policy tools, and the policy environment [14]. In order to avoid the weakening of policy tools caused by improper use of policy tools, various factors should be fully considered, multiple tools should be used in a balanced manner, the optimal combination should be rationally selected, and the crowding out and spillover effects that may be caused by the selection of policy tools should be reduced.

Taking command-type tools as adjustment points, the central government appropriately increased system reform and admonition-type tools to further coordinate and balance various policy tools. In the policy formulation process, the central government adjusts according to the basic model of “carrot”(incentive tool) + “stick” (command tool), which not only puts pressure on the main body of policy implementation, but also gives motivation and sufficient trust. The central government uses system reform tools rationally to alleviate conflicts and contradictions caused by the game of interests of various power subjects. At the same time, through various channels such as radio, television, and various new media, the policy bodies are more proactive in internalizing the value demands of teacher education, so as to realize the coordinated application of various policy tools and form a policy

synergy.

Finally, add performance appraisal tools to straighten out the multiple governance channels for teacher education. Therefore, teacher education needs to mobilize the diverse forces of society and coordinate efforts. Governments at all levels can actively introduce them through the purchase of services, and at the same time use third-party evaluation, mass self-evaluation, etc. to conduct performance appraisal and teacher professional development appraisal.

### *6.2.2 Optimize the combination of policy tools and give full play to the effectiveness of tools*

Each policy tool does not exist in isolation. They cooperate, interact and influence each other, and grasp the coordination and consistency of policy tools, so that each policy tool can play its own maximum role while coordinating with other policy tools. According to the situation of insufficient coordination of teacher education policy tools in my country, the following policy recommendations are given. At present, the two major aspects of education and learning and system construction are the main focus of capacity-building teacher education policy tools. Educational learning mainly revolves around training courses, training models, etc., and whether the training effects meet the standards is also an important aspect of the effective implementation of policies. Therefore, judging whether the policy effect is qualified or not requires the establishment of training effect evaluation and evaluation standards, so that the early-stage capacity-building tools and the later-stage command tools are combined. The use of command tools is the supervision and inspection of the previous policy implementation and the implementation of the previous policy the conditional guarantee. Reward and encouragement should be given to those who have achieved the training effect and are excellent. The reward and evaluation are combined to adopt another policy tool—incentive policy tool. The use of incentive tools based on command tools is conducive to policy implementation entities to follow policy objectives and implement policy orders. In addition, mobilize based on the evaluation results, raise requirements for schools, and call for exhortations to teachers, so as to use symbolic and persuasive tools. It can be seen that based on the uniqueness of each policy tool and the interrelationship between policy tools, the best combination of policy tools can be used to maximize the effectiveness of policy tools.

### *6.2.3 Increase incentive tools and system transformative tools to improve tool effectiveness*

In view of the current situation of teacher education policy tools centering on command tools and capacity-building tools, increasing the intensity and intensity of the use of incentive tools and system transformation tools is another major measure to achieve policy goals. First, increase the use of incentive tools to achieve a combination of long-term construction and short-term planning. Based on capacity-building tools, increase the corresponding incentive tools in the form of material rewards and spiritual honors, so as to mobilize the initiative and creativity of the main body of teacher education policy and achieve a spiral upward spiral of short-term goals. At the same time, the combination of incentive tools and capacity-building tools can achieve consistency between long-term construction and short-term planning. The short-term methods of “reward” and “evaluation” are supplemented by “system building”, “policy preferences”, and “consulting services”. Long-term development, so as to obtain short-term returns and long-term benefits. Second, to stimulate the vitality of the system's transformative tools. Increase systemic transformative tools to establish and improve a specialized institutional management system, promote the reform of teacher education in

terms of curriculum setting, training and training models, and integration of training and training through the construction of mechanisms and systems, and further strengthen the organization and management of teacher education.

In the research of basic teacher education policy texts, it is found that the authoritative reorganization tools are used very rarely, and only appear in the elements of education management. Multi-departmental collaborative processing can gather the strengths of all families and better promote the professional development of teachers. The professional development of teachers is no longer just a matter for the competent education department. The participation of the National Development and Reform Commission, the Ministry of Finance, the Ministry of Human Resources and Social Security, the Ministry of Science and Technology, the Ministry of Industry and Information Technology and other departments is more conducive to the expansion of the development of education informatization. Therefore, appropriately increasing the use of authoritative restructuring tools and transferring the power and resources of some institutions will be more conducive to promoting the implementation of basic teacher education policies. All government departments should give the teacher education the correct position, respect the leading position of the education department, and provide cooperation and support in all links of the teacher education policy process. In the process of setting the agenda for teacher education policies, various departments should actively contribute their opinions and suggestions, listen carefully to the statements and explanations of professional education personnel on teacher education issues, and deepen their understanding of teacher education issues. In the stage of teacher education policy decision and legalization, combined with the attributes of the department, propose corresponding solutions, follow democratic procedures, and actively promote the review and adoption of teacher education policies. In the implementation of teacher education policy, relevant departments should provide certain resource support, and form an effective policy implementation force through the involvement of multiple organizations.

#### ***6.2.4 Actively introduce voluntary tools to realize teacher education governance involving multiple subjects***

A comprehensive and in-depth analysis of various factors affecting policy tools is the basic work for implementing effective choices [15]. In teacher education, not only the overall planning of the state and the government, but also social organizations, schools of all levels and types, and individual teachers must bear corresponding responsibilities to form a mutually complementary and mutually supportive relationship, and achieve collaborative governance of teacher education involving multiple subjects. First, the government can add symbolic and persuasive tools and motivational tools to encourage, call, and exhort the majority of social organizations, schools and teachers to actively participate in the policy implementation process, and arouse their awareness of participation. Second, draw on the power of society and schools. The government clearly affirms the responsibilities of society and schools by formulating policies, and uses its resources, information, services, and third-party evaluations to mobilize the enthusiasm and initiative of society and schools to participate in teacher education. Third, introduce and use voluntary policy tools. The independent development of teachers is the fundamental way to realize the professionalization of teachers. The introduction of voluntary tools starts from the teachers themselves, affirms the teacher's dominant position in teacher education governance, and grasps that teacher development is the ultimate goal of teacher education governance. Therefore, the combination and application of voluntary tools, capacity-building tools,

and incentive tools, while relying on the two major hands of the government and teachers to govern teacher education and implement teacher education policies.

### **6.2.5 Enhancing the sustainability of policy tools**

Policy tools serve the policy goals and are the basic guarantee for the smooth realization of the policy goals. They are essential for enhancing the scientific formulation of policies. And effective implementation plays an important role. At the same time, because the policy objectives are derived from actual policy issues, the choice of policy tools also needs to rely on the diagnosis and determination of policy issues. But in fact, policy issues are constantly changing with changes in the internal and external environments. Therefore, the formulation and implementation of policies is a dynamic and long-term process that requires constant adjustments. In this process, it is necessary to strengthen policy tools. Sustainability to support the continued effectiveness of policy implementation. On the one hand, it is necessary to strengthen the supporting role of policy evaluation, and evaluate the risks before the implementation of policy tools, the problems during implementation, and the performance after implementation. From this series of continuous evaluations, the effectiveness of policy implementation can be realized; On the other hand, it is necessary to strengthen the policy deviation correction mechanism, promptly correct possible deviations in the implementation of policy tools, avoid negative policy effects, and give play to the sustainability effects of policy tools.

## **7. Conclusion**

The rational selection and balanced use of policy tools is a prerequisite for the effectiveness of tools, and is the basic guarantee for achieving policy goals and implementing policy effects. With the help of content analysis method, the whole picture of the selection and application of teacher education policy tools in my country is analyzed, and the general rules and basic characteristics of the selection and application of teacher education policy tools are explored. Use quantitative statistics to describe the advantages and disadvantages of the selection and application of teacher education policy tools, systematically grasp the overall characteristics and distribution structure of teacher education policy tools, analyze the progress space of teacher education policy tools, and form policy synergy from balancing teacher education policy tools; optimizing policies Combination of tools to give full play to the effectiveness of tools; increase incentive tools and systemic transformational tools to improve tool effectiveness; actively introduce voluntary tools to achieve teacher education governance involving multiple subjects and propose ways to optimize teacher education policy tools and improve teacher education practices.

Policy orientation plays a vital role in practice. Through the quantitative analysis of the policy text, it is more helpful for us to understand the content and trend of the policy, and make corresponding practical activities according to the policy direction. In the current period of rapid development, the role of teacher education in promoting the fairness of basic education is increasingly evident. It is more necessary to verify and summarize the results of basic teacher education to form a circular chain of policies and practices to mobilize the enthusiasm of all parties and jointly promote education. Fairness, thereby speeding up the process of education modernization.

## References

- [1] Yang Yue. *On my country's Teacher Education Policy Research* [J]. *Journal of Nanjing Normal University (Social Science Edition)*, 2018(01): 60-66.
- [2] Qi Zhanyong, Chen Zhaoyang. *Visual analysis of common words in the research hotspots of teacher education policy in my country* [J]. *Contemporary Teacher Education*, 2017, 10(01): 53-61.
- [3] Zhao Lili. *Analysis of the text content of China's photovoltaic industry policy from the perspective of policy tools* [D]. Hangzhou: Zhejiang University, 2011.
- [4] E.S. Savas. *Privatization and the partnership between the public and private sectors* [M]. Zhou Zhiren, translated. Beijing: Renmin University of China Press, 2002: 25-27.
- [5] MCDONNELL L M, ELMORE R F. *Getting the job done: alternative policy instruments* [J]. *Educational evaluation and policy analysis*.1987, 9(2) 133-152.
- [6] SCHNEIDER A, INGRAM H. *Behavioral assumptions of policy tools* [J]. *The journal of politics*, 1990, 52(2) 510-529.
- [7] Michael Howlett, M. Ramish. *Public Policy Research: Policy Cycle and Policy Subsystem* [M]. Pang Shi, et al. Shanghai: Shanghai Sanlian Bookstore, 2006: 17.
- [8] Ji Fei, Wu Shuiye. *The selection of policy tools for the development of vocational education in the western region under the background of poverty alleviation — Based on the quantitative analysis of the text of 21 documents in Guizhou Province* [J]. *Guizhou Social Sciences*, 2019 (1): 92-100.
- [9] Qiu Junping, Zou Fei. *Research on content analysis method* [J]. *Journal of Library Science in China*, 2004, (2): 12-17.
- [10] Chen Kun. *Content analysis method and its application in comparative education* [J]. *Culture and Education Data*, 2009(22):161-162.
- [11] Cao Yan. *Fundamental Education Equity from the Perspective of Policy Tools: Retrospect and Prospect: A Textual Analysis Based on the Basic Education Equity Policy from 1979 to 2016* [J]. *Educational Science*, 2017, 33(04): 24-31.
- [12] Cui Hongjie. *Research on my country's Teacher Education Policy since the Reform and Opening Up* [D]. Northeast Normal University, 2014: 3-5.
- [13] ELMORE R F. *Instruments and Strategy in Public Policy* [J]. *Policy Studies Review*, 1987, 7(1): 174-186.
- [14] Ding Huang, Yang Daifu. *The perspective, research approach and model construction of policy tool selection* [J]. *Administrative Forum*, 2009, 16(03): 21-26.
- [15] Qin Yaojian. *Choice of Policy Tools for Urban Ecological Environment Governance* [J]. *Journal of Heilongjiang Vocational College of Ecological Engineering*, 2015, 28(01): 3-4.