

Analysis of policies to develop the teaching force in rural areas of China*

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Abstract

To comprehensively and systematically assess problems and effectiveness of policies aimed at attracting teachers to rural areas in China in depth and clarify the direction of reforms, we analyze policies by using methods such as questionnaires, interviews, systematic analysis, text analysis, and shadow controls. Since the 18th National Congress of the Communist Party (2012), China has gradually developed special policies to attract teachers to rural areas, including policies to increase the number and improve the quality and compensation packages of rural teachers. The key factors that pose challenges to the expansion of the teaching force in rural areas of China include poor remuneration and unreasonable deployment of rural teachers and ineffective enforcement of the teacher exchange policy. Policies were introduced to increase the compensation packages to attract qualified teachers to rural schools, which establish an effective system to ensure adequate supply of resources to facilitate professional developments of rural teachers, and implement the teacher exchange and rotation system to attract more teachers to rural areas. China's policy-makers will make further efforts to increase remuneration of rural teachers and improve the rural teacher deployment mechanism and the teacher exchange mechanism between urban and rural areas.

Keywords: China, rural teachers, policy evaluation, direction of reform, teaching force

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Problem statement and literature review

Poor education in rural areas remains a major challenge in China. Expanding the teaching force is the key to improve education in rural areas (Yang, 2016). The shortage of qualified rural teachers is currently the biggest problem in China's education system, and solving this problem is on the top of China's teaching force development agenda (Pang, 2016). The number of rural students covered by compulsory education makes up 29.3% of the total number of students covered by compulsory education. Without good teachers, rural schools cannot deliver quality education (S. Zhang, 2015). The development of the teaching force in rural areas is at the core of China's efforts to build a moderately prosperous society, which might prevent the intergenerational transmission of poverty and achieve educational modernization. Currently, the number of rural teachers in China is about 3.30 million, accounting for about 30% of the total number of teachers in primary and secondary schools. They are shouldered with the important mission of teaching more than 40 million students in rural areas. Since the 18th National Congress of the Communist Party of China (2012), China has gradually developed special policies to attract teachers to rural areas. However, affected by the rural-urban divide, natural and geographical conditions, historical factors, the departure of elites from the countryside, loss of local culture, and the increase in population mobility in the extensive urbanization process, *inter alia*, the development of education in China's rural areas is hampered by the lack of attraction to the teaching profession, inadequate supply of teachers, inadequate resource allocations, unreasonable structure, poor quality of the teaching force, and other prominent problems.

In recent years, the development of the teaching force in rural areas is at the forefront of domestic and foreign policy research. Research addressing this issue affects not only the development of education and the teaching force in rural areas, but also the improvement of social equity. Existing studies on policies related to rural teachers mainly focus on three categories of policies: policies to increase the supply of rural teachers, policies to increase teacher remuneration, and policies to improve teacher quality.

With regard to policies to increase the supply of rural teachers, scholars believe that since China adopted the reform and opening up strategy, the focus of these policies has shifted from teachers' instrumental value to their intrinsic value (Fang, 2014). The government formulated and implemented a series of rural teacher education policies in order to train plenty of future teachers who are willing to serve in rural areas in China and teach students with a low socioeconomic status (H. Jiang, 2013). Some policies introduced at the beginning of the new century have played an important role in addressing problems, such as shortage of qualified rural teachers and structural deficit in China (An & Ding, 2014). Scholars have also identified the following four problems in the development of the teaching force in rural areas: (1) structural deficit persists (Liu, Wu, & Shi, 2014) despite the fact that schools are overstaffed (Zhou & Wu, 2014); (2) it's still very difficult for rural schools to attract college graduates (G. M. Wang & Zheng, 2014); (3) rural schools are still struggling with severe loss of teachers every year (Zheng & Wu, 2014); and (4) teachers overemphasize educational attainment, and their overall professional competence and quality is not high (J. Z. Zhang, 2012). How to cultivate high quality teachers for students with low socioeconomic status becomes an issue that needs to be solved urgently (Hollins & Guzman, 2005). Some researchers recommend that college graduates may be presented with the opportunity to work as teaching assistants in remote and poor areas (Labaree,

2010).

With regard to policies to improve rural teachers' remuneration, after China adopted the reform and opening up strategy, the social status and monetary compensation of rural teachers has improved (Z. H. Wu, 2012), but the overall remuneration level of rural teachers remains low (Hanushek, Kain, & Rivkin, 2004), lower than that of similar professions (J. Q. Jiang & Du, 2014). There are relatively large gaps between urban and rural areas in teachers' salaries and social welfare. They can become the obstructions of social development in China (H. Jiang, 2013). The gaps in teachers' salaries between urban and rural areas still exist (Zeng & Yi, 2015), and the policies designed to subsidize rural teachers are less effective than originally predicted (Z. H. Wu, Li, & Zhou, 2012). Taking the working environment, status and other factors into account, the level of wage of rural teachers is still relatively low (Z. H. Wu, 2013). Some scholars suggest that the government should step up policy support for and increase investment in rural schools (Green & Reid, 2004), establish special funds (Dee, Jacob, & Schwartz, 2012), address the regional disparity in teachers' salaries, change designs properly (Zeng & Zhou, 2014), and effectively raise subsidy standards for rural teachers (An, 2014).

In terms of quality improvement policies, policies have experienced four stages, namely, compensation, exploration, popularization, and national training (Chen & Wang, 2013). In 2007, the government implemented the Free Normal Education (Ministry of Education, 2007). Studies found that this policy selects a number of high-quality candidates who are dedicated to rural education, while there are some problems such as the curriculum can not satisfy the cultivation of rural teachers well (H. Jiang, 2013). In 2010, China fully carried out the National Professional Development Programs for Rural Teachers, aiming at enhancing the quality of primary and secondary school teachers in rural areas. Scholars hold that the career development support system only plays a limited role, the traditional training model and curriculum cannot meet their needs (P. Hudson & Hudson, 2008), and a one-off teacher training program not only cannot refer to diversity and equality of education but also has difficulty in changing the educational beliefs of teachers (Dang, 2011; X. Zhao, 2011). Teacher training institutions are hindered by the lack of long-term funding mechanisms (B. S. Wang & Feng, 2015). Teacher exchanges between urban and rural areas are either self-initiated by teachers (Greenberg & McCall, 1973) or arranged by the government (Guarino, Santibanez, & Daley, 2006). Problems in China's teacher exchange policies include low satisfaction (Bao & Xi, 2010) and departure from the original purpose (J. T. Wu, 2014). Scholars suggest that the government should increase financial investment in rural schools to attract more quality teachers through teacher exchanges and rotations (Ye, 2012), offer financial aid (Fulbeck, 2014), and raise the level of remuneration (Ingersoll, 2001).

Our literature review reveals that some scholars have done research on specific issues related to policies to develop rural teaching force and put forward policy recommendations. However, most of the existing studies focus on a specific problem in these policies and fail to look at them in a systematic manner. In terms of methodology, they tend to prefer theoretical analysis over empirical analysis. Therefore, this study aims to comprehensively and systematically assess problems in and effectiveness of policies to develop the teaching force in rural areas in China, and identify the direction of reforms. It deals with the theory and methods of policy analysis, provides a scientific interpretation of current policy issues, and puts forward recommendations to improve the existing policies.

Research design and methodology

Three basic methods are adopted in this study to analyze policies. The first is system analysis. This method is used to inspect policies of rural teaching force development, which is deemed as a dynamic system in the context of the larger state governance system to identify its locations, functions, features, and relationships with other social subsystems. The second is text mining. We use this method to derive unstructured information from text of policies on rural teaching force development and rearrange into structured information for quantitative analysis. The third is shadow control. Experts, managers, and participants are consulted to assess the effect of rural teaching force development policies, problems associated with this issue and solutions.

Methods used to collect information for policy analysis mainly include interviews and questionnaires. Field studies were conducted in 21 counties in 28 provinces nationwide. Two-hundred respondents were interviewed individually, including 120 rural teachers, 40 principals of rural schools, and 40 administrative staff members of government education departments at the county/district level. We held five meetings to interview 169 respondents of three groups: 30 policy-makers from educational, financial, human resources, and social security ministries at the central level; 60 local government officials and policy implementers from local education, institutional organization, finance, human resources, and social security departments; and 79 principals and teachers on the front lines of education. The first group consisted of five director-generals and deputy director-generals and 17 director and deputy directors of relevant divisions and bureaus under the Ministry of Education, five directors from the Ministry of Finance, and three directors from the Ministry of Human Resources and Social Security. The second group include five director-generals and deputy director-generals and 15 directors of education departments, and five directors of finance departments; five deputy directors of institutional organization offices and five deputy directors of human resources and social security departments at the prefecture-level and seven deputy governors of counties; 20 key officials of county/district-level education bureaus. The third group consists of 79 frontline principals and teachers. Three-hundred thousand words of transcripts were produced from semi-structured focus group interviews. Questionnaires are designed to gather information on factual issues, and no validity of concepts or criteria are discussed. We carried out expert evaluations on each question to ensure the validity and reliability of the questionnaires. The survey covered provincial-level administrative regions in eastern, central, and western parts of China. Based on GDP per capita (five groups: upper, upper middle, middle, lower middle, lower), the number of rural teachers, ratios, and other indicators, we distributed 5,800 questionnaires and 5,036 were returned with a return rate of 86.83%.

Interview transcripts were analyzed using text mining approach. Qualitative analysis methods, including open coding, Level 2 coding, and Level 3 coding. Based on the subject matter of this study, a list of words or phrases, from which keywords can be chosen, was generated from the text data through open coding. The final list of keywords was determined by using the Delphi Method. Twenty-one stakeholders, including researchers specializing in policies associated with rural teachers, educational administrators, principals, and teachers on the front lines of education were invited to attend three rounds of discussion, and produced the final list of keywords, which are remuneration of teachers, performance-based pay, social security, rights protection, problems in staffing policies,

workload, working conditions, substitute teachers, professional titles for teaching positions, bureaucratic inefficiency, prefecture-county differences, and social status. Free nodes were created based on keywords and were analyzed and categorized to form tree nodes. Frequency refers to the number of times a node appears; coverage refers to the percentage of text which resides in a node; percentage of a case node refers to the percentage of respondents at the node. A text analysis software (N-Vivo) was used to analyze text data.

Problems associated with the development of the teaching force in rural areas

Poor remuneration

Poor remuneration hinders efforts to improve rural teacher recruitment and retention (L. W. L. Dong, 2016). The Teachers' Law of the People's Republic of China stipulates that the average salary of teachers shall not be lower or higher than that of civil servants and shall be gradually raised. However, in practice, teachers are not very satisfied with their salaries. In urban areas, only 1.36% of principals and teachers hold that the level of teachers' salaries is much higher that of local civil servants; 6.63% believe it is slightly higher; 19.02% believe it is at the same level; 36.93% believe it is slightly lower; 36.07% are of the opinion it is much lower (Figure 1, left). In rural areas, only 0.83% of principals and teachers hold that the level of teachers' salaries is much higher that of local civil servants; 6.94% believe it is slightly higher; 29.17% believe it is at the same level; 28.61% believe it is slightly lower; 34.44% are of the opinion it is much lower (Figure 1, right).

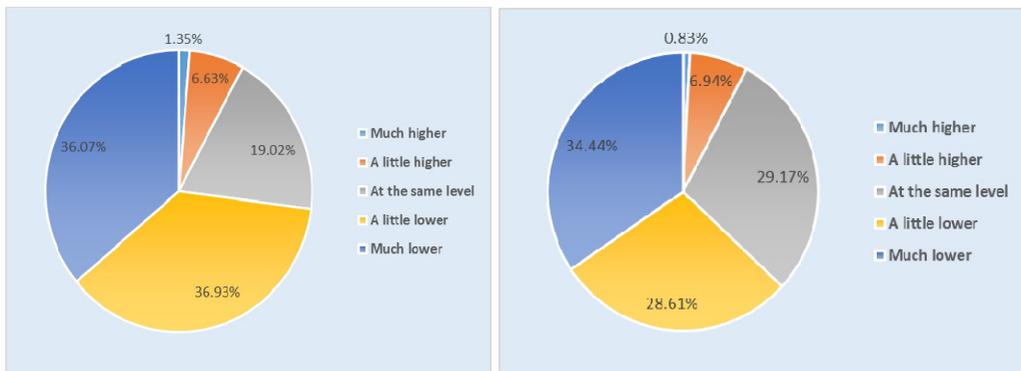


Figure 1. Comparison of the level of teachers' salaries and that of local civil servants in urban (left) and rural (right) areas

Rural teachers' overall remuneration levels remain low (Sun & Ma, 2015). The coverage of rural teacher subsidies needs to be expanded. Some provincial-level administrative divisions have not yet developed rural teachers' grant programs. Full coverage of counties in contiguous poor areas is yet to be achieved. The average subsidy standard of 40.00% of the counties covered by rural teacher grant programs is below RMB 300. Among teachers, 65.82% believe the subsidy standard is too low, while 75.65% are of the opinion that the

current subsidy criteria are not reasonable and cannot accurately reflect the actual workload and the hardships they have undergone. Poor working conditions, heavy workloads, and low subsidy standards make it more difficult for rural schools to attract and retain quality teachers. Another problem of the subsidy management system is ineffectiveness. Some regions have not established a subsidy notification system. Although the difference in base salaries of teachers in primary and secondary schools across China is small, the subsidy level of rural teachers is significantly lower than that of their urban counterparts. This urban-rural gap seriously hinders the development of the teaching force in rural areas, especially remote rural areas. The survey found that the amount of subsidy received by teachers of primary schools in the eastern part of China is about half of that of their urban counterparts. The figures for the central region and western regions stand at 89.64% and 82.17%, respectively. The amount of subsidy received by teachers of secondary schools in the eastern part of China is about 67.54 percent of their urban counterparts. The figures for the central region and western regions stand at 75.33% and 55.89%, respectively.

Ineffective deployment of rural teachers

Shortage of quality teachers and poor quality of education are two common problems in rural schools (L. W. L. Dong, 2016). Moreover, rural schools have great difficulty retaining quality teachers. About half of rural school principals have reported loss of teachers in recent years. High-quality teachers as well as young teachers under the age of 35 account for the majority part of the departing teachers (Fan, 2015). We placed emphasis on the frequency, coverage (%), and percentage of case (%) of themes, such as “serious teacher shortfall”, “slow staffing budget approval process”, “structural imbalance in budgeted teaching posts”, “extra-budgetary recruitment of teachers”, “bureaucratic inefficiency in staffing budget management”, “difficulty in stock adjustment”, to identify specific problems in policies and the urgency in addressing these problems (see Table 1).

Table 1. Major problems in the implementation of teaching force staffing policy and urgency in addressing them

No.	Theme	Frequency	Coverage (%)	Percentage of case node (%)
1	Serious teacher shortfall	270	23.71	56.71
2	Slow staffing budget approval process	216	14.47	45.73
3	Structural imbalance in budgeted teaching posts	150	14.03	36.59
4	Extra-budgetary recruitment of teachers	138	12.16	31.10
5	Anomie in staffing budget management	138	11.12	20.12
6	Difficulty in stock adjustment	120	10.07	23.78

First, a frequency query run on the expression “serious teacher shortfall” revealed that the expression was mentioned 270 times and 57.41% of the respondents reported the

problem, indicating that serious teacher shortfall is a common problem in rural schools. Survey results show that 66.87% of the respondents reported the number of budgeted teaching posts in their schools was “far from enough” or “a little less than enough”; 1.23% believed it was “enough”; 1.90% reported it was “more than enough” or “very sufficient”. Second, the slow staffing budget approval process is unable to fulfill the demand arising from student migration in the process of urbanization. It is also unable to adapt to changes that HR demand due to the establishment of new schools, expansion of existing schools, dormitory management, etc. With no new teachers sharing the additional workload, the pressure on original rural teachers greatly increases. The survey found that about 32.35% of local teaching staff budgets were approved before 2005; about 14.71% were revised during 2006-2011; only about 52.94% were revised after 2012; and 50.52% of the respondents reported an “untimely” budget approval. Third, the structural imbalance budgeted for teaching posts remains a serious challenge facing rural schools. Many rural schools still don’t have enough teachers to offer a full range of courses. Of the respondents, 37.04% reported the problem. Fourth, many rural schools recruit teachers using extra-budgetary funds. There is a large proportion of low-pay substitute teachers in rural areas, especially in the western region, and it is very difficult for them to become official staff members. Of the respondents, 31.10% reported the problem. Fifth, bureaucratic inefficiency is a severe problem facing teaching staff budget management. For example, some rural schools left officially budgeted posts vacant; school funds are often diverted to other civil service posts. There are also other management problems, including inflexibility and cumbersome procedures. Of the respondents, 20.12% reported problems of this nature. Sixth, no reasonable exit mechanism has been established for teachers working in an officially budgeted post. It is not uncommon for unqualified teachers to occupy a budgeted post for a long term. The inefficiency in administration also provides room for freeloading. Moreover, staffing budgets are directly allocated to schools, making it difficult to co-ordinate them at a regional level. As a result, some schools may have too many officially budgeted posts while other schools are suffering from a shortfall of teachers. Of the respondents, 23.78% reported problems of this nature.

Inefficiency in the implementation of teacher exchange and rotation policies

Compared with urban teachers, rural teachers are badly paid and living in poor conditions (Q. Dong, 2015). During 1996-2014, China has promulgated more than ten policies to balance the number of teachers between urban and rural areas. Among them, three were documents specifically targeting this issue and seven were non-specialized documents (Xue & Li, 2015). However, teachers’ willingness to participate in exchange or rotation programs is not strong. About 22.17% of teachers were not decided, 21.39% unwilling, 1.28% very unwilling, 44.32% willing, and 10.84% very willing. The willingness of principals to participate in exchange and rotation programs is slightly higher than teachers. About 9.23% of the principals were undecided, 7.43% unwilling, 0.87% very unwilling, 65.69% willing, and 16.78% very willing (Figure 2).

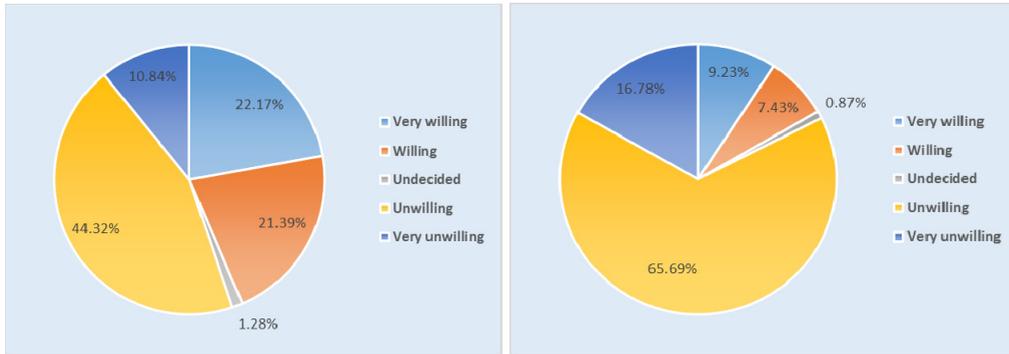


Figure 2. Willingness of teachers (left) and principals (right) to participate in exchange and rotation programs

The level of willingness of principals to send teachers in exchange and rotation programs were as follows. Among them, 19.12% were very willing, 61.37% willing, 10.02% undecided, 8.19% unwilling, and 1.30% very unwilling. Teachers participating in exchange and rotation programs should improve their performance in receiving schools. Of principals and teachers, 22.17% reported teachers that were sent to their schools under exchange and rotation programs played a significant role; 31.09% believed they played a great role; 29.45% reported their role was average; 12.81% believed they only played a small role, while 4.48% of principals reported they brought troubles (Figure 3).

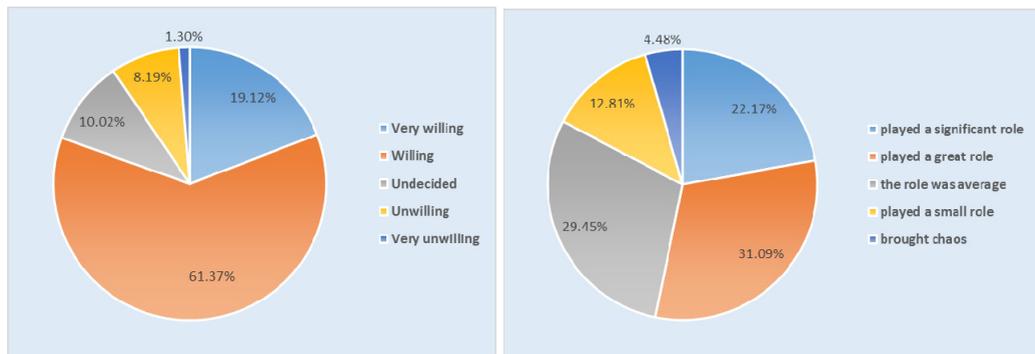


Figure 3. Willingness of sending teachers to participate in exchange and rotation programs, and how teachers perform in receiving schools

In China, several policies specifically stipulate that a teacher in an urban primary or secondary school must have more than one-year experience teaching in a rural school or under-performing schools before they can be given a senior job title. However, these policies are implemented poorly. Of principals, teachers, and administrators, 56.39% reported they knew this specific requirement; 15.83% reported they might adopt a flexible approach to this requirement; 10.09% reported the requirement was not specific; 8.57% reported there was no such requirement; 9.12% reported they never heard of this requirement (Figure 4). Rural schools offer less career development opportunities. Of principals, teachers, and administrators, 35.41% reported the job title criteria were not in favor of teachers in poor, remote areas.

Of rural teachers, 61.42% expressed wishes of transfer to urban areas, 18.24% of which expressed strong wishes. About five teachers per rural school apply for reassignment each year. Under the pilot reform program of the job title assignment system in primary and secondary schools, 806 teachers have been given the title of senior teacher in accordance with the new evaluation criteria, more than 240 out of which are from rural schools at a county or lower administrative level. This program broadens career paths of rural teachers in a certain extent. However, it fails to truly favor teachers from rural primary and secondary schools as these teachers account for nearly 70% of teachers in China's primary and secondary schools.

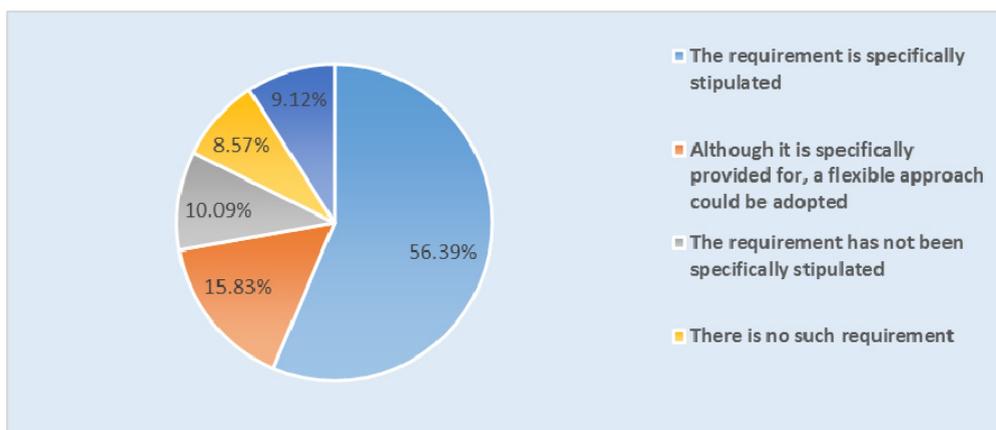


Figure 4. Whether senior job titles require teaching experience in rural or under-performing schools

Effects of existing policies

Improving the remuneration of rural teachers to attract high quality teachers to rural schools

The Notice on Implementing the Subsidy Scheme for Teachers in Contiguous Poor Areas as Required by Central Government was jointly issued by the Ministry of Education and the Ministry of Finance. It stipulates that local governments may at their own discretion offer subsidies to support teachers in rural schools or teaching centers in contiguous poor areas and improve the remuneration level of teachers in rural or remote areas, and the central government should offer funds to support such efforts. Since the policy was introduced in 2013, the central government has allocated RMB 4.392 billion in funding to support such efforts of local governments, and 949,000 rural teachers from 604 counties have benefited from this policy. Twenty-one out of the 22 provincial administrative regions that have contiguous poor areas have offered subsidies to rural teachers. In areas where this policy is implemented, the percentages of rural schools and rural teachers benefiting from this policy are very high and reach 94% and 87%, respectively. The attractiveness of rural areas with higher subsidy standards to teachers has increased. Urban teachers have expressed a willingness to teach in rural schools in such areas.

In order to further improve the compensation package of rural teachers, China is

gearing up the construction of dormitories for rural teachers in remote areas. In 2010, the Ministry of Education and the National Development and Reform Commission (NDRC) jointly issued the Guidelines on the Pilot Dormitory Project for Rural Teachers in Remote Areas, marking that the pilot dormitory project officially got off the ground. In 2011, the NDRC and the Ministry of Education issued the Notice on Budgeting for the Dormitory Construction Plan for Rural Teachers in Remote Areas, providing for budgeting work related to the dormitory project which covered 1,485 counties in the Midwest. In 2012, the NDRC and the Ministry of Education issued the Notice on Circulating the Dormitory Construction Plan for Rural Teachers in Remote Areas, and this plan covered 23 provinces (autonomous regions and municipalities) in the Midwest, Xinjiang Production and Construction Corps¹⁾ and Heilongjiang Provincial Land Reclamation Bureau. As of 2014, the central government had allocated RMB 14.1 billion in funding to support the construction of 252,000 dormitory rooms and 312,000 teachers had moved in the dormitories. During 2010-2014, the central government allocated RMB 2.59 billion to support the construction of teacher dormitories in five autonomous regions and Qinghai, Sichuan, Gansu, Yunnan, and Tibetan Autonomous Prefectures. In 2014, the central government spent RMB 870 million to construct 11,500 dormitory rooms in five autonomous regions. In 2015, 370,000 dormitory rooms were completed, benefiting 460,000 teachers. These efforts have significantly improved the housing conditions of rural teachers in remote areas and helped retain teachers in rural areas. "We will never forget this day because we finally have a home," said Zheng Miao, a teacher in Mantanghong School which offers nine years of compulsory schooling in Zhangwu County, Liaoning Province on 10 July, 2012 when she moved into the dormitory (Huang, 2015). Tian Weimin, a teacher from Badahe Primary School in Lubuge Township, Luoping County, Qujing City, said moving from old dangerous houses to new teacher dormitories improved rural teachers' working and living conditions, improved their job satisfaction, and helped retain teachers in rural areas. An official at the Education Bureau of Enshi City, Hubei Province said teacher dormitories solved the housing problem of rural teachers in remote areas so that they could dedicate more of their energy to teach students, thus help propel the compulsory education system towards balanced development.

Establishing an effective system to ensure adequate supply of resources to facilitate professional development of rural teachers

Introducing multiple measures at the same time to effectively increase the supply of quality teachers to rural schools

The first measure is actively promoting the free teacher education policy. During 2010-2015, six Chinese normal universities recruited 52,000 students, 90.8% of which had teaching experience in the Midwest after graduation, and offered free tuition to them. Guided by the policy of the central government, 24 provincial-level administrative regions have introduced free local teacher education programs by offering free tuition or reimbursing tuition to students of normal schools. About 34,000 normal and other college graduates went to rural areas to teach in primary and secondary schools each year, representing an increase of 75% from 2009 (Figure 5). The free teacher education policy has

attracted a number of quality students to study for teaching degrees and supplied qualified teachers to rural schools.

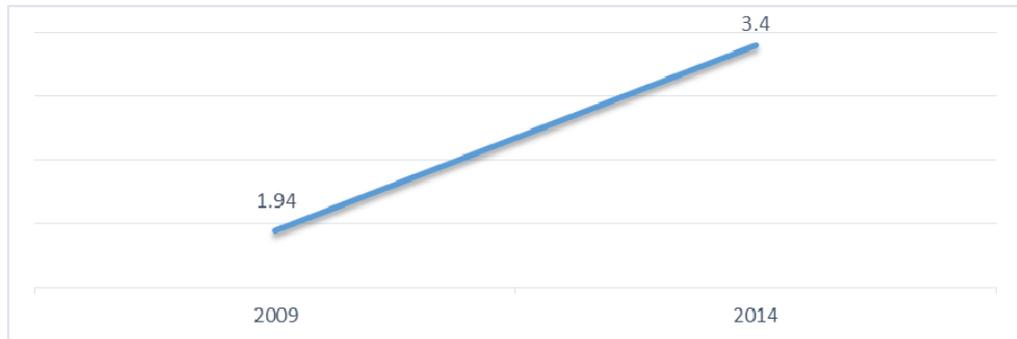


Figure 5. Number of graduates from normal universities and other college graduates teaching in rural schools (10,000 persons)

The second measure is creating special teaching posts. During 2011-2015, the central government invested RMB 22.26 billion in funding to fill 306,700 special teaching posts in over 30,000 rural schools (including primary schools in villages and teaching points) in 1,000 counties of 21 provinces (regions and municipalities) in the Midwest and Xinjiang Production and Construction Corps. During 2011-2015, guided by the entrance exam exemption policy for Master's degree in education programs for teachers in special posts, 43 colleges and universities announced 8,500 enrollment plans targeting teachers selecting to work in rural schools after their service term of the special post has expired (China Institute of Education Policy of Beijing Normal University & Center for Teacher Education Research of Beijing Normal University Key Research Institute of Humanities and Social Sciences at Universities of the Ministry of Education, 2015). The special post program effectively alleviates the shortage and structural imbalance of rural teachers and has become an important measure to supply quality rural teachers. In 2014, the government raised the salary of teachers in special posts from RMB 27,000 to RMB 31,000 per capita in the western region, and from RMB 24,000 to RMB 28,000 per capita in the central region. The percentage of teachers in special posts selecting to work in rural schools for another three consecutive years reached 87%.

The third measure is exempting students who have required teaching experience in rural schools from the entrance exam of Master's degree in education programs. Since 2004, in order to get recommended for the entrance exam exemption for the Master's degree in education, 8,881 college graduates have selected to teach in rural schools (China Institute of Education Policy of Beijing Normal University & Center for Teacher Education Research of Beijing Normal University Key Research Institute of Humanities and Social Sciences at Universities of the Ministry of Education, 2015). It effectively alleviates the shortage and structural imbalance of rural teachers, especially in selected key counties under programs that promote universal nine-year compulsory education and eliminate illiteracy among young and middle-aged people.

Coordinating different policies (staffing budget management policy, job title assignment policy, etc.) to promote rural education

The first policy is standardizing the staff budgeting standards of urban and rural schools. In 2014, the General Office of the Central Institutional Organization Commission, the Ministry of Education, and the Ministry of Finance jointly issued the Notice on Standardizing the Staffing Standards of Urban and Rural Primary and Secondary Schools. It stipulates that staffing budgets of primary and secondary schools shall be determined on an equal basis with their urban counterparts, and staffing budgets of small village schools and teaching points shall be determined depending on the student-teacher ratio and the class-teacher ratio to ensure that all required school subjects, especially physical education, music, art, and science are taught in rural schools, and to effectively solve the shortage and the structural imbalance of rural teachers. So far, primary and secondary schools in Beijing, Shanxi, Inner Mongolia, Liaoning, Jilin, Shanghai, Fujian, Shandong, Qinghai, Xinjiang, and other provincial administrative areas have adopted unified staffing standards which help improve the deployment of rural teachers and promote the integration of urban and rural education.

The second policy is strengthening continuing professional development to improve the quality and competence of rural teachers. Efforts have been made to strengthen continuing professional development of rural teachers and principals, to further improve the overall quality of rural teachers, and to ensure the healthy development of rural education. During 2010-2014, the National Training Program for Teachers of Primary and Secondary Schools trained more than 7.3 million teachers from kindergartens, primary and secondary schools across China, of which over 7.06 million (96.4%) were rural teachers and more than 6.4 million were from rural schools in the Midwest. With regard to continuing professional development of principals of rural schools, 2,000 principals of kindergartens, primary and secondary schools in contiguous poor areas are invited to attend a national-level training program under a supporting project designed for principals in remote and poor rural areas. Among the different principal training methods adopted across the country, the effect of off-the-job training in different counties/prefectures was the best with an average score of 1.54 (1 standing for "very good", 2 for "good", 3 for "so-so", and 4 for "no effect"), followed by replacement training with an average score of 1.58, off-the-job training in the original county/prefecture with an average score of 1.81, training organized in the form of lectures with an average score of 1.86, and remote training with an average score of 2.09 (Figure 6).

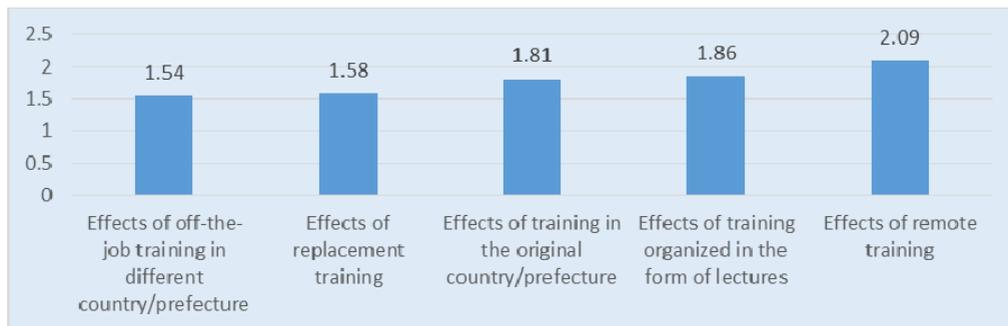


Figure 6. Effects of different teacher training methods

The third policy is introducing criteria for teaching job title assignment in favor of rural teachers. The Opinions on Vigorously Promoting the Development Rural Teaching Force stipulates that a teacher in an urban primary or secondary school must have more than one-year experience teaching in a rural school or under-performing schools before he/she can be assigned to a high-level position or given a senior job title.

Implementing the teacher exchange and rotation system to attract quality teachers to rural areas

Principals should promote the exchange and rotation of teachers. In 2014, the Ministry of Education, the Ministry of Finance, and the Ministry of Human Resources and Social Security issued the Opinions on Promoting County/Prefecture-Level Teacher Exchange and Rotation between Schools Covered by Compulsory Education, comprehensively promoting county/prefecture-level teacher exchange and rotation, and attracting quality principals and teachers to rural or under-performing schools. The Ministry of Education issued the Plan for Construction of Demonstration Areas to Promote the Centralized Rural Teacher Management by County/Prefecture-Level Education Departments and the Notice of the Office of the Ministry of Education on Applying for Construction of the First Batch of Demonstration Areas to Promote the Centralized Rural Teacher Management by County/Prefecture-Level Education Department. Thirty counties or prefecture-level cities across 20 provinces submitted the application materials and were selected as the first batch of demonstration areas. China is striving to institutionalize principal and teacher exchange and rotation within three to five years to encourage counties and prefectures to balance the deployment of teachers within their respective administrative areas, and in a wider scope where the condition is much more mature.

Another area of concern is encouraging volunteers to participate in the pilot flexible pre-school education supporting program in rural or remote areas in the Midwest. In 2012, the Office of the Ministry of Education and the Office of the Ministry of Finance jointly issued the Notice on Implementing the Pilot Flexible Pre-School Education Supporting Program in Rural or Remote Areas in the Midwest to launch the pilot program in Liaoning, Henan, Hunan, Guizhou, and Shanxi. In 2013, another eight provinces (i.e., Hebei, Inner Mongolia, Fujian, Jiangxi, Guangxi, Yunnan, Gansu, and Qinghai) were included in the program. In 2014, Heilongjiang and Ningxia also joined the program and the number of pilot provinces reached 14 (Guizhou Province exited the pilot program). The central government has created a special fund to construct teaching points in remote rural areas which have no ability to open kindergartens, to recruit college graduates, secondary school graduates with a pre-school education degree, and non-budgeted kindergarten and primary school teachers as volunteers to teach at these teaching points for two years. The central government provides each volunteer with a subsidy of RMB 5,000-15,000 per year and other benefits, including living allowances and social insurance contributions. Within three years, 3,521 teaching points were created and 7,081 volunteers were recruited under the program, and the central government allocated RMB 189.81 million to subsidize these volunteers. The program has recruited a number of high-quality volunteers, expanded educational resources in rural areas, improved pre-school education in some remote areas, and increased the coverage of pre-school education.

Future trends for rural teaching force policies

Rural teachers are the weakest link in the Chinese teaching force and developing the rural teaching force is on the top of China's education agenda. To address the shortage of quality rural teachers, the Chinese government has implemented diversified measures in accordance with the National Long-Term Education Reform and Development Plan (2010-2020) to attract and retain quality teachers in rural areas step by step and constantly improve the overall quality of rural teachers. The 11th meeting of the Central Leading Group for Comprehensively Deepening Reforms (CLGCDR) and the 14th meeting of the Leading Group for National Education Reforms respectively reviewed and approved the Rural Teacher Support Program (2015-2020) (issued by the General Office of the State Council in June 2015). The CLGCDR puts development of rural education on the same strategic level with the goal of preventing the intergenerational transfer of poverty, and is striving to increase the supply of quality teachers to rural areas by introducing eight major initiatives, including initiatives to improve professional morality and expand rural teacher supply channels. It aims to expand sources of quality rural teachers, improve the deployment of rural teachers, improve their teaching competence, protect their rights, and increase the attractiveness of the teaching profession. It is also striving to develop a high-quality hard-working rural teaching force by 2020 to serve the modernization of education. This is China's first policy specifically designed to promote the development of the rural teaching force since the founding of the People's Republic of China. It points out a development direction for rural teachers.

Further improving the compensation of rural teachers

Quantitative analysis of national and provincial policy education programs reveals that improving the status and compensation of teachers is a key goal of policies introduced by China's central and provincial-level governments (Xue, 2014). To recruit and retain more teachers in rural areas, governments need to further improve teachers' compensation packages. Governments at all levels will also continue to increase subsidies offered to teaching posts in remote and poor areas to attract quality teachers (Xue & Li, 2015). According to our survey, 2.8% of principals, teachers, and administrators received a subsidy of RMB 1,000 or more per month; 8.9% received RMB 500-1,000; 15.3% received RMB 300-500; 51.7% received RMB 100-300; and 21.3% received less than RMB 100. Only 0.1% of principals and teachers believe the current subsidy level can achieve the goal of attracting and retaining teachers in rural areas; 52.6% believe it plays a small role; 39.2% hold that it is too low to attract teachers. Of principals and teachers, 5.1% believe a subsidy of below RMB 300 is sufficient to attract and retain teachers in rural area; 15.8% believe RMB 300-500 is sufficient; 55.7% believe RMB 500-1,000 is sufficient; 10.7% believe RMB 1,000-1,500 is sufficient; 12.7% believe RMB 1,500 or above is sufficient. The average amount of subsidy principals and teachers participating in the survey believe can effectively attract and retain teachers in rural areas is RMB 1,053.

This study suggests that teaching posts should be divided into different levels according to geographical environment, economic level, ease of life, culture, and other criteria to lay groundwork for a unified subsidy payment system. Provincial governments (as the main player) and county/prefecture-level governments should work together to raise

the subsidy for rural teachers to about RMB 1,000 per person. The central government should issue honorary certificates to teachers with more than 30 years of teaching experience in rural schools, and provincial and county-level governments should respectively reward teachers with more than 20 and 10 years of teaching experience in rural schools. Governments at all levels should continue to implement relevant policies, set specific standards, and give favors to rural teachers in the selection and review processes of awards. To prevent opportunistic behavior, subsidy and preferential policies for rural teachers should target jobs rather than individuals.

Further improving the deployment mechanism of rural teachers

The central government should introduce more preferential policies for rural areas related to funding, staffing budget, job title assignment, etc. to further improve the allocation of teaching resources. Provincial governments should establish a unified rural teacher supply mechanism under which rural teachers should be budgeted and recruited in a centralized manner. Local governments and teacher education institutions should step up efforts to promote teacher education according to local needs, and adopt diversified methods to supply multi-skilled rural teachers. The scope of the special post program should be expanded with a focus on border areas, old revolutionary bases, poverty-stricken areas and ethnic autonomous areas, and other poor areas in the Midwest. Further efforts should be made to advance the National Training Program for Teachers of Primary and Secondary Schools with a focus on rural teachers and provide professional training to rural teachers, including training with a replacement mechanism, sending teaching resources to the countryside, remote training, short-term intensive training, expert guidance, school-based training, and other effective forms of training. The goal is to ensure all rural teachers should complete 360 hours of training by 2020. Governments at all levels should effectively integrate quality resources of colleges, universities, county-level teacher development centers, and primary and secondary schools, develop a professional development support system for rural teachers, institutionalize continuing professional development of rural teachers, and continue to improve the quality of rural teachers.

Provincial governments should strengthen provincial-level centralized planning, revitalize the stock and optimize the structure of teaching resources, set a proper class-teacher ratio and subject-teacher ratio to meet the needs of urbanization, explore specific flexible staff budgeting measures, and establish a full set of operable rural teacher deployment standards that combine mandatory and flexible criteria. They should develop a fixed quota staffing budget (by taking into account student-teacher ratio, class-teacher ratio, and subject-teacher ratio) and a flexible staffing budget (by taking into account teachers' workload, including teaching, lesson planning, counseling, and administration workload). Provincial governments should deploy rural teachers in a manner in line with the trend of the population migration from rural areas to cities in the urbanization process; improve the management system and the dynamic staff budgeting mechanism to ensure that the county-level educational administrative departments allocate rural teachers within the authorized quota on the basis of the size of class, subjects, sources of students, etc. They should regularly review the number of students of urban and rural schools, and adjust the flexible quota accordingly to form a dynamic adjustment mechanism. They also should strictly implement the teacher recruitment system, establish a teacher exit mechanism, and dismiss freeloaders. County/prefecture-level governments should establish a system to

regularly review rural teacher staff budgets, strictly prohibit misappropriation, diversion interception of budget funds allocated to rural teachers, and punish units and responsible persons for violations of staffing budget policies according to relevant laws and regulations.

A new idea for improving the staff budgeting system of primary and secondary schools is to change the system in a progressive manner to incorporate staff salaries as well as medical, pension, housing, work injury, maternity, children's education, and other social security into the scope of government procurement to ensure all teachers enjoy the same compensation and benefits with staff members in budgeted posts (Li, Xue, & Zhao, 2016). A teacher exit mechanism should be established by grasping the opportunity presented by the public institution human resources system reform and the teacher certification and examination system reform (Xue, Li, & Zhu, 2016). Specific measures should be introduced to manage dormitory management, canteen, security and other logistics personnel, and special funding should be provided to ensure related staff members receive their rightful compensation and benefits.

Further improving the urban-rural teacher exchange mechanism

The central government should organize regular exchange, inter-school competition, and other programs to attract quality principals and teachers to rural schools; diversify the exchange and rotation methods based on the competence level of teachers and the characteristics of subjects they teach. It should link the exchange and rotation program to performance evaluation of principals and teachers and other systems; place sufficient emphasis on evaluation of the effects of the exchange and rotation program, and increase the administrative authorization of receiving schools. County/prefecture-level governments should grasp the opportunities presented by the national plan for construction of demonstration areas to promote the centralized rural teacher management by county/prefecture-level education departments, to promote innovative teacher and principal exchange and rotation programs, to break the bottleneck of the system, and to institutionalize effective programs within their respective administrative scope. They should develop plans to send retired prestigious teachers and senior teachers to rural schools to give lectures and support teaching activities, and the central government should give appropriate support. The review process of the job title assignment should focus on teachers' professional performance and teaching experience, and should not take into account academic achievement related to foreign languages (except for foreign language teachers) and thesis publishing. Preferential policies in favor of rural teachers should be efficiently implemented.

Contributions and limitations of this study

The main contributions of this study are as follows. First, it systematically analyzed policies to develop rural teaching force, took a closer look at specific policies in the context of the entire policy system, and analyzed the weak links in the policy system and problem representation. Second, the scope of the investigation of this study was extensive. It covered 28 Chinese provincial-level administrative regions in the spatial extent and surveyed stakeholders at all levels, from central policy-makers to teachers in the forefront of rural education. This kind of large-scale, multi-level survey can provide a more comprehensive

insight into Chinese policies associated with the development of rural teaching force on the basis of local experiences and perspectives. However, it also has limitations. Because the study was conducted mainly based on cross-sectional data except for a number of indicators for which we compared data of different time nodes, it cannot accurately reflect the overall trends in Chinese policies associated with the development of rural teaching force. To provide a more accurate in-depth picture of the development of the rural teaching force in China, we need to carry out further research and create a specialized database on the basis of panel data in the further study.

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Footnotes

1. Xinjiang Production and Construction Corps is located in the territory of the Xinjiang Uygur Autonomous Region. It is under the dual jurisdiction of the central government, and the government of the Xinjiang Uygur Autonomous Region enjoys the provincial jurisdiction.