Empirical Research on Current Construction Situation of Primary and Middle School Teachers in New Era

ZHAN Li-Li
Nanchang Normal University, Nanchang, Jiangxi, China

Teachers are the top priority to develop the education. The thesis, first of all, has structured the index system of current teachers’ construction situation in the new era. Then, the thesis has adopted the independent sample test and analysis of variance to analyze the difference of current teachers’ construction situation in different dimensions on the basis of questionnaire data collected from teachers in five provinces and cities in the new era. Finally, the thesis has given some suggestions on improving teachers’ situation in the new era from four aspects such as the improvement of the treatment guarantee mechanism for primary and middle school teachers, the operation of the cooperation mechanism among colleges, government and primary and middle school in cultivating students, the formation of training system on teachers’ personal growth process and the establishment of the evaluation standard of teachers’ titles as well as the standard evaluation procedure of professional titles.

Keywords: primary and middle school, the construction of teachers

I. Basic Information Distribution of Samples

In accordance with the research requirement, the author has chosen teachers from east, central and west part of China and sent 1500 questionnaires via Wenjuanxing platform. 1450 questionnaires have been returned in total, of which 1448 questionnaires are effective with effective recovery of 96.5%. Basic information of teachers interviewed is shown in Table 1 as follows:

Table 1

| Type                      | Proportion (%) | Number of People |
|---------------------------|----------------|------------------|
| Gender                    |                |                  |
| Male                      | 31.63          | 458              |
| Female                    | 68.37          | 990              |
| Years of Teaching         |                |                  |
| less than 5 years         | 22.03          | 319              |
| 5—10 years                | 18.02          | 261              |
| 11—20 years               | 23.34          | 338              |
| 21—30 years               | 25.35          | 367              |
| more than 31 years        | 11.26          | 163              |
Differences of Current Construction Situation of Primary and Middle School Teachers in Different Variables

From Table 2, there is no significant difference of scores between male teachers and female teachers in cultivation and training as well as title evaluation. It indicates that gender has certain instead of significant effect on teachers’ pre-service training, post employment training and professional title appraisal. Male teachers have a significant difference in scores of treatment guarantee with female teachers, of which female teachers indicate a higher satisfaction toward treatment guarantee.

| Type                        | Male (N=458) | Female(N=990) | T   | P   |
|-----------------------------|--------------|---------------|-----|-----|
| Treatment Guarantee         | 3.71±0.713   | 3.80±0.660    | -2.322* | 0.020 |
| Cultivation and Training    | 3.54±0.692   | 3.61±0.654    | -1.798 | 0.072 |
| Professional Title Evaluation | 2.61±1.070  | 2.67±0.986    | -1.133 | 0.258 |

Note: * means 0.01<P<0.05. ** means P<0.01. *** means P=0.000

From Table 3, there is no significant difference in the score of treatment guarantee whether the teacher is compiled or not. It indicates that the compilation has certain instead of significant effect on teachers’ treatment guarantee. However, there is a significant difference in the cultivation and training as well as professional title evaluation between teachers being compiled and those without being compiled.

| Type                        | Being (N=398) | Without Being Compiled(N=398) | T   | P   |
|-----------------------------|--------------|-------------------------------|-----|-----|
From Table 4, there is a significant difference between teachers in different posts concerning treatment guarantee and cultivation and training, of which the average score of managerial staff is significantly higher than that of teachers. There is no significant difference between teachers in different posts concerning the professional title evaluation, which indicates that the post has certain instead of significant effect on the professional title evaluation.

Table 4

Comparative Analysis of the Construction of Primary and Middle School Teachers with different posts

| Type                        | Teacher (N=1228) | Managerial Staff(N=220) | T     | P    |
|-----------------------------|------------------|-------------------------|-------|------|
| Treatment Guarantee         | 3.75±0.678       | 3.85±0.685              | -2.060 | 0.040|
| Cultivation and Training    | 3.56±0.675       | 3.79±0.583              | -5.265*** | 0.000|
| Professional Title Evaluation| 2.65±1.033       | 2.65±0.899              | 0.111   | 0.880|

Note: *means 0.01<P<0.05, **means P<0.01, ***means P=0.000

From Table 5, there is no significant difference in all dimensions whether majors of teachers are education or not. It indicates that majors have certain instead of significant effect on the treatment guarantee, cultivation and training as well as professional title evaluation.

Table 5

Comparative Analysis of the Construction of Primary and Middle School Teachers with majors of highest education.

| Type                        | Normal majors (N=1123) | Majors other than normal majors (N=325) | T     | P    |
|-----------------------------|------------------------|----------------------------------------|-------|------|
| Treatment Guarantee         | 3.78±0.679             | 3.74±0.675                             | 0.894 | 0.371|
| Cultivation and Training    | 3.58±0.682             | 3.63±0.610                             | -1.262 | 0.207|
| Professional Title Evaluation| 2.66±1.036             | 2.65±0.93                              | 0.151 | 0.880|

Note: *means 0.01<P<0.05, **means P<0.01, ***means P=0.000

As it is shown in Table 6, based on homogeneity of variance test result, the treatment guarantee is homogeneous (P=.432). Therefore, the analysis of variance is adopted. The result is F(4,1443)=1.942, p=0.101, which indicates that there is no significant difference among teachers with different years of teaching concerning the treatment guarantee.

Table 6

Analysis of Variance of Teachers with Different Years of Teaching concerning Treatment Guarantee

| Variable                   | Quadratic Sum | Degree of Mean Square | F     | P    |
|---------------------------|---------------|-----------------------|-------|------|
Similarly, as it is shown in Table 7, based on homogeneity of variance test result, the treatment guarantee is homogeneous (P=.766). Therefore, the analysis of variance is adopted. The result is F (4, 1443) = 2.384, p=0.049, which indicates that teachers with different titles have significant difference in treatment guarantee. From the analysis of posterior comparisons, the author has found that the treatment guarantee of primary and middle school teachers with high professional title (M=4.09) is significantly higher than that of primary and middle school teachers with third-grade title (M=3.69). The effect value ($\omega^2$) is 0.004. In accordance with the standard proposed by Kohen (1988), a low effect value indicates that the title has a weak link to the treatment guarantee. Besides, the power of a statistical test (1-$\beta$) is .802 complying with the standard of .80 above, which indicates a good power of a statistical test.

Table 7

| variables                        | quadratic sum | degree of freedom | mean square | F     | P     | posterior comparisons                   | $\omega^2$ | 1-$\beta$ |
|----------------------------------|---------------|-------------------|-------------|-------|-------|----------------------------------------|------------|-----------|
| Treatment guarantee              | Between-group| 4                 | 1.092       | 2.384 | .049  | High professional (primary and middle school teachers) > Third-grade (primary and middle school teachers) | .004       | .802      |
|                                  | Intra-group   |                   | 661.639     |       | .458  |                                        |            |           |
|                                  | Total         |                   | 665.200     |       |       |                                        |            |           |

Note: *means 0.01<P<0.05, **means P<0.01, ***means P=0.000

As it is shown in Table 8, based on homogeneity of variance test result, the cultivation and training is homogeneous (P=.727). Therefore, the analysis of variance is adopted. The result is F (4, 1443) = 4.013, p=0.003, which indicates that teachers with different years of teaching have significant difference in the cultivation and training. From the analysis of posterior comparisons, the author has found that the scores of teachers with 11-20 years of teaching (M=3.67) are significantly higher than that of teachers with 30 years of teaching above (M=3.46). The effect value ($\omega^2$) is 0.008. In accordance with the standard proposed by Kohen (1988), a low effect value indicates that the years of teaching has a weak link to the cultivation and training. Besides, the power of a statistical test (1-$\beta$) is .912 complying with the standard of .80 above, which indicates a good power of a statistical test.

Table 8

| variables                        | quadratic sum | degree of freedom | mean square | F      | P       | posterior comparisons | $\omega^2$ | 1-$\beta$ |
|----------------------------------|---------------|-------------------|-------------|--------|---------|------------------------|------------|-----------|
| Cultivation                      | Between-group| 4                 | 1.767       | 4.013$^{**}$ | .003 | 11-20 years of teaching | .008       | .912      |
|                                  | Intra-group   |                   | 661.639     |        | .458    |                         |            |           |
|                                  | Total         |                   | 665.200     |        |         |                         |            |           |

Note: *means 0.01<P<0.05, **means P<0.01, ***means P=0.000
From Table 9, the professional title appraisal based on homogeneity of variance test result is heterogeneous (p=0.000). Besides, the Brown Forsyth statistics is adopted to carry out the robust detection of mean equality, whose result is F (4,1443)= 10.326, p=0.000. It indicates that the treatment guarantee of teachers with different years of teaching is significantly different. Based on posterior comparisons, the author has found that: the treatment guarantee of teachers with more than 31 years of teaching (M=3.86) is significantly higher than that of teachers with less than 5 years of teaching (M=3.07). The effect value (ω²) is 0.025. In accordance with the standard proposed by Kohen (1988), a low effect value indicates that the years of teaching has a weak link to the treatment guarantee. Besides, the power of a statistical test (1-β) is 1.000 complying with the standard of .80 above, which indicates a good power of a statistical test.

### Table 9

| variables                     | F     | degree of freedom 1 | degree of freedom 2 | P     | posterior comparisons | ω²  | 1-β  |
|-------------------------------|-------|---------------------|---------------------|-------|-----------------------|-----|-----|
| Professional title appraisal  | 10.326*** | 4                   | 1443                | .000  | More than 31 years of teaching >less than 5 years of teaching | .025 | 1.000 |

Note: *means 0.01<P<0.05. **means P<0.01. ***means P=0.000.

### III. Analysis on Current Situation of Primary and Middle School Teachers

### Table 10

| Type                                        | Type                  | proportion (%) | Number of teachers |
|---------------------------------------------|-----------------------|----------------|--------------------|
| Time spent by teachers in non-teaching work | 1/4                   | 34.0           | 493                |
|                                             | 1/3                   | 28.6           | 414                |
|                                             | 1/2                   | 22.9           | 332                |
|                                             | 2/3                   | 9.1            | 132                |
|                                             | 3/4                   | 5.3            | 77                 |
| Matters consuming a lot of energy and time of teachers at school | Finishing online study tasks at different level | 74.8           | 1083               |
|                                             | Filling in forms with close contents | 49.7           | 719                |
|                                             | Participating in meetings at different level | 49.5           | 717                |
|                                             | Finishing non-teaching tasks assigned by schools temporarily | 60.7           | 879                |
|                                             | Finishing inspections and tasks at different level | 77.2           | 1118               |
### Gross annual income (including five social insurance and one housing fund)

| Income Range               | Yes (%) | No (%) |
|----------------------------|---------|--------|
| less than 50,000           | 37.5    | 543    |
| 50,000 to 80,000           | 50.4    | 730    |
| 80,000 to 100,000          | 8.4     | 121    |
| above 100,000              | 3.7     | 54     |

### Are you willing to be a teacher throughout your life?

| Answer | Yes (%) | No (%) |
|--------|---------|--------|
| Yes    | 51.9    | 751    |
| No     | 48.1    | 697    |

### Reasons to change the career

| Reason                                                                 | Yes (%) | No (%) |
|------------------------------------------------------------------------|---------|--------|
| Low treatment and social status                                        | 36.7    | 532    |
| Limited prospect, lack of sense of achievement                        | 4.6     | 67     |
| Dislike being a teacher                                               | 1.2     | 18     |
| Limited social communication is not good for the establishment of interpersonal connections | 2.3     | 33     |
| Miscellaneous                                                          | 3.2     | 47     |

### Treatment problems of primary and middle school teachers in your opinion

| Problem                                                                 | Yes (%) | No (%) |
|------------------------------------------------------------------------|---------|--------|
| Low salaries in general don’t equal pains of teachers.                | 93.3    | 1351   |
| Low entry barriers of teachers                                        | 23.9    | 346    |
| Low social approval degree                                            | 67.1    | 971    |
| Imperfect social security and no guarantee for lawful rights and interests | 58.4    | 846    |
| Professional title evaluation is not smooth.                          | 63.8    | 924    |
| Few chances to be awarded.                                            | 54.5    | 789    |
| Pre-service training emphasis on theory over professional skills.     | 22.3    | 323    |
| Post-service training scope is too large.                            | 30.8    | 446    |

### Main reasons affecting teachers’ treatment in your opinion

| Reason                                                                 | Yes (%) | No (%) |
|------------------------------------------------------------------------|---------|--------|
| People’s understanding of the teaching profession                     | 15.5    | 225    |
| Teachers’ professional skills are challenged.                         | 1.5     | 21     |
| Local economic level                                                  | 15.5    | 225    |
| The attention and investment of government and educational authority in education | 65.8    | 953    |
| Miscellaneous                                                          | 1.7     | 24     |

### Weakness of colleges when cultivating students with normal majors in your opinion

| Weakness                                                                 | Yes (%) | No (%) |
|-------------------------------------------------------------------------|---------|--------|
| Practice is not connected with theory. Normal university students cannot adapt themselves to the needs of education and teaching well. | 70.1    | 1015   |
| Single method to cultivate students with normal majors formulaic        | 53.9    | 781    |
| Colleges pay little attention to it.                                   | 57.6    | 834    |
| Colleges pay little attention to the internship, which is not implemented well. | 18      | 261    |
| The training content is not comprehensive enough.                      | 36.9    | 534    |
| Professional ethics of graduates cultivated by colleges is low.        | 22.2    | 321    |
| Miscellaneous                                                           | 4.5     | 65     |
IV. Results and Discussion

(1) Teachers’ Status Should be Highlighted. The Treatment Guarantee Mechanism of Primary and Middle School Teachers Should be Improved.

In accordance with questionnaire data, it can be seen that 87.9% of teachers earn 80,000 below annually in total. 74.8% of teachers indicate that they spend a lot of energy and time finishing online study tasks at all levels at school. When teachers are asked “What are the main problems of teachers’ treatment?”, the top answer is low salaries in general, which don’t equal the hard work they do at school, accounting for 93.3%. The answer ranking the second is the low social approval degree, accounting for 67.1%. The answer ranking the third is that the professional title evaluation is not smooth, accounting for 63.8%. It can be seen from another data that governments and education authorities’ attention and investment in education are regarded as the main factors affecting the treatment by 65.8% of teachers. After analyzing the questionnaires of 48.1% of teachers who want to change the career, the author found that the low treatment and social status are the most important factors forcing teachers to change the career.

In accordance with the concrete requirement that “teachers’ status and treatment need to be improved continuously and being a teacher will be a desirable career.” In Opinions of the CPC Central Committee and the
State Council on Comprehensively Deepening the Reform of the Construction of Teachers in the New Era, the author proposes the following suggestions in order to improve the primary and middle school teachers’ treatment and living conditions as well as make the career more popular: First, Party committees and governments at all levels should take the responsibility for improving primary and middle school teachers’ political and social as well as career status, and attracting outstanding talents to be teachers on a stable footing. Schools at all kinds of levels should clearly realize their own social responsibility for setting good examples to students and teaching and influencing students by their own words and deeds; Second, the financial expenditure structure should be optimized further. The treatment of primary and middle school teachers should be deemed as the priority of public financial expenditure, the priority expenditure of financial education funds at all levels, and the priority field to transfer payment funds from superiors. In accordance with the principle that “The authority should assume the responsibility for the expenditure of its own financial rights.”, areas guaranteeing primary and middle school teachers’ treatments by law and in full should be praised and given financial incentives. In contrast, money of areas failing to guarantee primary and middle school teachers’ treatments should be deducted and the person in charge in these areas should be questioned, informed and held accountable for the failure as per rules and regulations; Both incentives and constraints should be enhanced at the same time. The treatment of primary and middle school teachers should be guaranteed actively; Third, Opinion has also proposed specific requirement for the improvement of teachers’ income distribution and incentive mechanism. It has also highlighted that the workload and performance of teachers should be reflected effectively and the distribution of merit pay should be skewed towards class teachers and special education teachers. Therefore, schools at all levels should formulate feasible performance evaluation scheme as per the actual situation of local schools and regions in a bid to guarantee teachers’ treatment in accordance with the performance.

(II) The Cooperation Mechanism Among Colleges, Governments and Primary and Middle Schools Should be Highlighted to Improve Teachers’ Pre-service Quality Comprehensively.

The questionnaire data indicates that: 70.1% of teachers think that normal university students cultivated by colleges can’t connect the theory with practice well enough. Thus they can’t adapt themselves to the requirement of education and teaching. During the interview of the front line presidents of primary and middle school, they said that current graduates from normal university were too weak with regard to the professional qualities compared with those in 1980s and 1990s from the secondary normal schools.

Opinion proposes that “cooperation among three entities” should be upheld, which means local government, colleges and primary and middle school should cooperate with each other to cultivate qualified teachers. The cooperation of university, government and school (University-Government-School, U-G-S for short) should be stuck to in order to fulfill the reform and development of teachers’ pre-service cultivation, through which the education majors can build up a shared community. To make it specific, teachers in universities should response to practical problems arising from primary and middle school education and teaching and guide students majoring education to study and think these problems. Teachers in universities should also be encouraged to carry out research on primary and middle school education. As for primary and middle schools, teachers at these schools should carry out educational practice actively and put the research on school-based problems into teaching practice. Primary and middle schools should enhance the research cooperation with universities through
various channels. In this way, theory can provide guidance for practice and practice can promote the theory in turn. As for governments, they should formulate relevant policies and invest funds to promote the in-depth cooperation concerning teaching and research between universities and primary and middle schools. All kinds of professional communities should be established to share teachers’ professional experience and intelligence with the help of Internet in an effort to improve the standard and quality of teachers’ pre-service cultivation.

(Ⅲ) The Training System Concerning Teachers Personal Growth Process Should be Established by in-depth Communication with Each Teachers.

As for teachers’ need for training, the result of “what are the main contents of teachers’ training you participated in?” is shown in Figure 1 as follows:

From the chart, we can see the training teachers participating in most frequently is the study of professional knowledge and skills. The study of new ideas on education ranks the second. The need for topics which is participated in by most teachers is lower. For example, although only 6% of teachers on average need the knowledge and skills in subjects, 73.14% of teachers participated in this training. Similarly, only 20% of teachers need training on new ideas of education, 62.91% of teachers participated in this kind of training. However, the professional development which is needed by the most teachers is not included as a training topic. From this questionnaire, the first three topics teachers need are relevant skills by applying information technology to the improvement of teaching (48%), mental health education skills (35%) and scientific research guidance and case writing skills (57%) respectively. However, in reality, only 25.35% of teachers participated in training of applying information technology to the improvement of teaching. Only 10.22% of teachers participated in training of mental health education skills and 14.92% of teachers participated in training of scientific research guidance.

As for the training effect, the questionnaire data indicates that 30.8% of teachers think that the post-service training scope is too large. The survey of teachers who are satisfied with the effect of trainings they have participated in within recent years is shown in Figure 2 as follows:
Figure 2. You are very satisfied with the effect of training you have participated in within recent years.

The chart indicates that only 11.86% of teachers are very satisfied with the effect of training they participated in and 8.29% of teachers are not satisfied with the effect of training at all. The reason why teachers’ response on this training is so different deserves to be thought carefully: whether does the post-service training take teachers’ practical need into consideration? Is there any training at different level for teachers in different growth phase? Do teachers themselves have any plans to participate in the training in accordance with their career development phase?

As it is known to all, teacher training is one of the important ways for teachers’ professional growth. With the increase of the overall strength of our country, the development of teachers is paid more and more attention to. The teacher training is also supported correspondingly. All kinds of trainings ranging from “training at city or county level”, “training at provincial level” to “training at national level” have become available one after another. However, teachers are forced into a situation where so many trainings make teachers exhausted. Under this circumstance, the obligatory value of trainings will be affected, which means the training effect and professional development of teachers are both affected negatively.

Teacher training is closely connected with the personal growth of teachers. What do teachers really need? The “initiative” should be returned to teachers themselves. And trainings should be based on the prospective of teachers. The training mode suitable for their growth should be established. Therefore, the teacher training should aim at the growth of teachers. The need for teacher training should be linked to the teachers’ personal growth process. Problems arising from teachers’ personal growth should be taken into consideration when designing the training contents for teachers in a bid to improve teachers’ professional development. Teachers’ personal growth process should be recorded, including problems which teachers have encountered and the need for teachers’ knowledge and skills. It can provide not only the reference to the training contents teachers need but the basis on which the training system of teachers’ personal growth can be established. The training system can concentrate on and optimize training resources and improve professional qualities of teachers comprehensively.

At the same time, schools should establish a study system by the study community in the form of “1+N”, a partner growth camp, as per teachers’ personal development needs, such as study involving all teachers, pre-service training, new teacher training, and backbone teacher training, etc.
(IV) Teachers’ Self-management Ability Should be Highlighted. Professional title Evaluation Standard and Procedures Should be Specific and Clear.

The professional title evaluation system is the main way of measuring the professional teaching ability of primary and middle school teachers and the effective encouragement of their work. Teachers participate in the professional title evaluation not only because of the increase of their salaries but the pursuit of career goals and ideals. The titles are meaningful for teachers in that it can bring teachers spiritual honor in addition to the material benefits. The title system for primary and middle school teachers has been established since 1986. At the beginning, the system can play an active role in improving teachers’ salaries and encouraging teachers to improve their abilities and qualities. However, the disadvantages of this title system have come into being gradually with the change of the age, which have affected teachers’ work. Therefore, it is high time to carry out the reform of the title system for primary and middle school teachers. The reform of the title system for primary and middle school teachers has been tested from 2009. The pilot was expanded in 2011 and the reform was comprehensively deepened in 2015. The title system for primary and middle school teachers is improved and becomes mature by solving problems and disputes.

After the classification and analysis of the questionnaire data returned, the author has found a kind of data concerning the title evaluation that deserves to be thought carefully:

![Pie Chart](image)

*Figure 3. Do you agree with the abolishment of the title evaluation system?

Only from the data supporting the abolishment of the title evaluation system, the author has to think about what’s wrong with the title evaluation system. 73.27% of teachers support the abolishment of it. We need to find out the reason further.
Figure 4. Which kind of problems are involved in the title evaluation system in your opinion?

From Figure 4, it can be seen that 78.94% of teachers think the problems existing in the title evaluation are: The number of the title is very limited. The salary difference between different titles is becoming larger and larger. 75.83% of teachers think the problem existing in the title evaluation is: The index available at school is limited, so they have to wait in line. 49.1% of teachers think the title evaluation is not transparent enough. Many teachers who have the relationship with leaders can acquire the titles. From these data, it is not difficult for us to conclude that teachers doubt whether the title evaluation is fair or not.

Therefore, the author suggests that the president of school formulating the title evaluation system should not decide the standard of it by himself or herself alone. The president should share this right by improving teachers’ self-management ability. First, within the scope of the school, all teachers should vote for the old teachers’ representatives, backbone teachers’ representatives, middle-aged teachers’ representatives, young teachers’ representatives, administrative representatives and logistics service personnel representatives to form the drafting committee of the professional title evaluation system; Second, the evaluation of professional titles of primary and middle school teachers should go through the procedures, including applying for and recommending qualification approval, submitting evaluation materials, lecture defense, expert evaluation and approval, etc. Each procedure should have relevant policies and regulations. The evaluation committee of professional titles should preliminarily draft the evaluation system of professional titles as per the relevant policies and requirements. Finally, all representatives should be invited to discuss the drafted the evaluation system of professional titles for several times and then make the final decision. During this process, the final title evaluation plan must be as detailed as possible. Then a standard of it should be established. After comprehensive thinking, the plan should be improved and adjusted. And the title evaluation system established finally can be implemented.

Conclusion

Primary and secondary school teachers are professional and technical personnel who perform the duty of education and teaching. They undertake the sacred mission of teaching and educating people, cultivating
builders and successors of socialist cause and improving national quality. Therefore, the quality of teachers directly affects the overall level of education in China. Therefore, this paper takes the teachers in five provinces and cities as the research object, analyzes the current situation and causes of the teachers' team in primary and secondary schools, and finally puts forward corresponding countermeasures, that is, to improve the construction level of primary and secondary school teachers, we must improve the treatment guarantee mechanism of primary and secondary school teachers, give full play to the mechanism of collaborative education between universities, government and primary and secondary schools, comprehensively improve the quality of pre-service training and give full play to teachers’ self-management To improve the training and management system of primary and secondary schools.

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