The Better Player in the Chinese Educational Reform, Party Secretary or School Principal?

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Cover Page Footnote

1.Pormulgated by the Central Committee of the Communist Party of China and the State Council. 2.Pormulgated by the People's Government of Sichuan Province. 3.Pormulgated by the People's Government of Anhui Province. 4.Pormulgated by the People's Government of Chengdu. 5.As a centralized, one-party state, there is a dual system of administrative and Communist Party of China (CPC) leading posts in different levels of organizations. The Party secretary of an organization acts at the head of the party branch in that organization. In schools, there are both the principal who is responsible for administrative affairs and the Party secretary responsible for Party affairs. The secretary is mainly responsible for ideological guidance. The document emphasizes that a principal should at the same time serve as Party secretary, which is called "concurrently shouldering administrative and Party responsibilities".

INTRODUCTION

At the stage of a comprehensively deepened reform in China, improving quality has become the focus of education, and the construction of teaching staff is regarded as the key to education modernization. In recent years, the central government has issued guiding opinions on the reform of the administrative system (Opinions on Comprehensively Deepening the Reform of the Construction of Teaching Staff in the New Era, 2018)[1], and a large number of regional reform measures has been put in place (Implementation Opinions on Strengthening the Construction of Teaching Staff[2] ,2013; Opinions on strengthening the construction of the teaching staff[3] ,2013). Under the county-based education management system in China, the county-level education authorities play an important role in the construction of teaching staff, and they have issued plenty of reformative policies for the construction of teaching staff. These documents generally emphasize the comprehensive reform of systems and mechanisms, including the implementation of the "management by county government and employment by schools", the improvement of qualification and recruitment system for primary and secondary school teachers, the enhancement of reform on professional titles and assessment system, and the comprehensive implementation of the reform on human resources management of teachers, so as to enhance the professional ability of teachers(Implementation Opinions on Strengthening the Construction of Teaching Staff [4],2014).

The personnel system reform for teachers at the county level only solve the issue of "managing" the teachers, but how a teacher is "used" at school is decided by the principal. In this type of "top-down" reform, the principals are responsible for the implementation of policies. How a principal should lead the teachers who are "managed" by a superior education authority becomes a new challenge for principals.

The role of principals in China has changed a lot in recent years. In grassroots organizations, the Party's leadership is more emphasized. In 2016, the Central Government issued the "Opinions on Strengthening Party Building in Primary and Secondary Schools", stating that school principals should "concurrently shouldering administrative and Party responsibilities"[5]. Judging from the descriptions of the duties of a principal and a *Party secretary*, the *Party secretary* seems like transformational leadership and the principal resembles transactional leadership. This study focuses on how a school principal should prioritize his work in terms of

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Party and administrative leadership to promote the development of teachers and which of the two types of leadership is more important in different types of schools.

REVIEW OF RELATED LITERATURE

The Impact of Personnel System Reform on Teachers

Since the founding of the People's Republic of China, in the context of China's planned economy, teachers have always been regarded as registered "national cadres". As the birth rate declined, the number of enrolled students was decreasing, which caused a series of problems. For example, the number of teachers required is decreased but the teachers who had been registered could not be easily dismissed, which led to a redundancy of teachers and a structural shortage of teachers in many schools especially in rural areas. Additional, teaching posts were occupied by teachers who are in senior age, weak in professional expertise and educational skills, which lead to lack of teachers who are truly capable of teaching tasks (Wang, 2010) ,specialized teachers were in short supply, and no position was left to recruit new teachers. In the long run, the workload would increase, causing job burnout and loss vitality of schools (Hao &Yu, 2013). The dilemma of reality has greatly promoted the progress of teacher personnel system reform, as well became an important way of deepening reform by the Xi Jinping administration. In order to stabilize and optimize the composition of teachers in their respective regions, certain counties and prefectures took a series of reform strategies in aspects such as teacher recruitment, training, remuneration, and performance accountability.

The reform on teacher recruitment changed from the centralized management model in the past to a "management by county government and employment by schools" model. Under this model, a school has the right to decide whether or not to employ a certain teacher. In practice, a lot of schools apply the "rank and yank" and do not hire teachers ranking in the last position. Studies have shown that rank and yank can improve the performance potential of employees (Adist, Bobrow, Hegel & Fitzpatrick, 2018), increase teachers' competition and crisis awareness, and improve their professionalism and work enthusiasm (Liu & Qian, 2007). But there are also negative effects, such as increase in teachers' stress, increase in employees' perception of unfairness at workplace, reduction in organizational commitment (Moon, Scullen & Latham, 2016), increase in disruptive competition within the team (Moon et al., 2016) and reduction in employees' trust in management (Pfeffer & Sutton, 2006).

Training to promote professional ability of teachers is an important part of the personnel system reform. Studies have shown that the quality of teachers can be improved by strong and powerful learning in their professional development (Garet, Porter, Desimone, Birman & Yoon 2001). High-quality teacher professional development can improve teachers' personal abilities and increase peer learning opportunities, it also gives teachers the tools they need to approach classroom challenges with agreement, and access to a professional community(Cohen, 2009).

The merit pay system is an important system implemented by China in the reform. Researchers believe that the implementation of the merit pay system can improve the enthusiasm of teachers. Because of the relatively strict performance standards, teachers can set specific performance goals and work plans according to their own condition, so that teachers can be more confident in their job and work harder (Qian, 2008), but at the same time, the drawbacks of merit pay system are also very obvious. For example, Adnett's(2003)research shows that merit pay system is not conducive to fostering the cooperative spirit of teachers, which will reduce the cooperation between teachers.

Performance accountability is an effective policy tool for evaluating teachers. High stake performance accountability is an important means of promoting school improvement (Hargreaves & Brunton, 2004; Mathis, 2003; Scott, 2005;). In the education domain, accountability seems to improve the professionalism of teachers and provide more focused, higher quality, and more equitable teaching (Sloan, 2006). Demands on new skills increase daily and accountability and academic performance emerge in the balance (Vandenberghe & Huberman, 1999; Brock & Grady, 2000). At the same time, accountability is the primary stress factor for teachers(Brock & Grady, 2000; Vandenberghe & Huberman, 1999;). In an accountability environment, more than half of teachers feel great stress on their careers (Zhu, 2002).

In general, the reform of the personnel system can positively promote the professional ability of teachers, and the work stress brought by it is also recognized as a negative impact by researchers.

Impact of Principal on the Work Stress of Teachers

As the superintendent of a school, whether a principal's leadership approaches are open or authoritative, innovative or conservative and whether or not fully supportive of the teachers' work, would greatly affect the teachers' work stress (Davis & Wilson, 2000). Studies have shown that principals can aggravate or reduce teachers' stress by providing support to them (Nagel & Brown, 2003). The excellent leadership of a principal can have negative prediction on teachers' work stress (Yusof, 2011), and the principal's support is an important factor in reducing teachers' work stress (Rolf, & Wagner, 2001). Possible means to be taken by a principal to reduce teachers' stress include use of feedback, recognition, and supportive leadership practices (Blazer, 2010); Authorization for teachers, increase their autonomy and internal motivation to reduce stress levels (Davis & Wilson, 2000); Acknowledge their achievements as personal accomplishment are associated with higher job satisfaction and lower job stress (Fisher, 2011).

At the same time, principals in different environment may have different types of influence on teachers. The Contingency Theory believes that principals should adopt different leadership styles in different environments. When scholars discuss the background of a school, they are most concerned about the SES. The applicability or effectiveness of a particular leadership

model is related to the external environment and the local context of the school (Hallinger, 2003). Erwin, Winn & Erwin(2010) compared leadership skills of principals in urban, suburban, and rural contexts, they found that there's great difference between suburban and rural principals in exemplary schools. The researchers believed this could be attributed to differences in financial resources. Waters and Marzano (2006) studied the leadership practices of urban and suburban principals, but they believed that the conclusions did not apply to rural leaders.

Transactional Leadership and Transformational Leadership and Their Impact on Teachers

Transactional leadership and transformational leadership are two typical types of leadership that can well explain the roles of the Chinese Principal's as "*Party secretary*" and "principal". The researchers' consensus on the two kinds of leadership is that the transactional leadership as management of employees by means of barter to exchange what's needed by both sides, and it pays more attention to individual goals and needs of employees. Transformational leadership is based on the criticism and analysis of transactional leadership, it focuses on the establishment of group norms and guides members to work together to achieve organizational goals. That is to say, the core of transformational leadership is to explore the potential motivation of followers, to meet their higher value needs, so that followers consciously commit to the realization of organizational goals (Burns, 1978; Bass, 1998;)

Transformational leadership and transactional leadership are not two extreme types of leadership that cannot be integrated, but two mutually reconcilable leadership styles, which means that a leader can simultaneously be transactional and transformational. (Bass, 1998). In specific management, researchers believe that effective leaders should use both transformational and transactional leadership strategies (Judge & Piccolo, 2004).

The idea of building a shared vision for the members of a school which applies transformational leadership is critical to school management, because the vision can unite the members of the organization under a common goal, and can inject a strong spiritual support for the development of the teacher, enabling professional development and individual growth (Owens, 2004); it can also increase challenges in the teachers' work and raise their satisfaction, stimulate teachers' autonomous motivation, and further create a work environment that can enhance the teachers' creativity, and have a positive predictive effect on the teachers' self-efficacy (Nir & Kranot, 2006).

Most research on the influence of transactional leadership on teachers is concentrated in the comparison with transformational leadership. A large number of studies have shown that many aspects of an organization applying transformational leadership, such as membership loyalty, satisfaction and job performance, are superior to that of transactional leadership. Transformational leadership has a direct or indirect impact on employees' performance, while transactional leadership has only an indirect impact on their performance (Jung & Avolio, 2000),

furthermore, transactional leaders are less influential than transformational leaders (Koh, Steers & Terborg, 1995).

METHODOLOGY

Sampling and Participants

Mentougou District, a subordinate area of Beijing, has 40 public primary and secondary schools. In the first survey in 2013, questionnaires were distributed to all teachers in 40 primary and secondary schools in this district, and 2,049 valid samples were collected. In 2014, we continued to give out questionnaires to teachers who had participated in the survey in the previous year. However, during the research, some schools were merged and some withdrew in the progress, resulting in loss of samples. As of the third survey in 2015, the number of valid teacher samples collected from 2013 to 2015 was 603 from 34 schools in the Mentougou district, including 23 primary schools and 11 secondary schools.

Table 1 compares the difference of background variables between the valid samples in the study and the total samples collected in 2013. We have found that 71% of the 603 valid samples collected were female teachers. In the 2013's sample, the ratio was 66%. If we take a look at the teachers' education background, the valid sample is very similar to the 2013's sample – 87% and 82% of the teachers have a bachelor's degree, 4% and 6% have a master's degree, almost no teachers have a doctoral degree (the rest of the teachers received an education below undergraduate level). There is little difference between the distribution of professional titles of the two types of samples. Among the participating teachers, the number of teachers with senior professional titles is the highest, accounting for 48% of the valid samples; the number of primary school teachers is more, accounting for 62% and 56% of the two types of samples respectively. As for teaching experience, the average teaching experience of valid samples is 18.00 years, slightly higher than the 17.37 years of the 2013's samples. In summary, there is no significant difference between the 603 samples that were effectively tracked and the initial samples.

Table 1   Teacher Characteristics

	Teachers in 2013—2015 (N=603)	Teachers only in 2013 (N=2049)

Variable	M	SD	M	SD
Female	0.71	0.45	0.66	0.48
BA degree	0.87	0.34	0.82	0.38
MA degree	0.04	0.19	0.06	0.23
PhD degree	0.00	0.00	0.00	0.02
Senior title	0.48	0.50	0.47	0.50
First-level title	0.37	0.48	0.36	0.48
Second-level title	0.10	0.30	0.12	0.33
Third-level title	0.00	0.04	0.00	0.03
Primary school teachers	0.62	0.48	0.56	0.50
Middle school teachers	0.38	0.48	0.44	0.50
Teaching years	18.00	8.49	17.37	9.39

Instrument

The questionnaire for the teachers consists of four parts:

1. Background information, mainly including professional titles, education background, social and economic status and other basic personal information, etc.

2. The Teacher Professional Ability Scale consists of 22 self-edited items and examines the professional ability level of teachers from five aspects: teaching preparation, classroom teaching, teaching evaluation, teaching research and school management. The questions adopt a five-point Likert scale, the respondents are asked to rate 1-5 on topics such as "If a student in my class becomes mischievous, I believe I know how to make him change quickly." 1 means completely disagree and 5 completely agree. The reliability test results showed that the Cronbach's alpha was 0.926, the reliability was good. The CFA results were $\chi2(194) = 1632.591$, $p<0.001$, CFI = 0.931, TLI = 0.918, RMSEA = 0.071, the model fits well.

3. The Teacher Work Stress Scale consists of 15 self-edited items and examines the work stress level of teachers from four aspects: work responsibility, interpersonal relationship, workload and self-efficacy. The questions adopt a five-point Likert scale, the respondents are asked to rate 1-5 on topics such as "I often feel that I can't cope with the conflicting demands of people around me." 1 means completely disagree and 5 complete agree. The reliability test results show that the Cronbach's alpha is 0.917, and the reliability is good. The CFA results are $\chi2(84)=1181.563$, $p<0.001$, CFI=0.928, TLI=0.910, RMSEA=0.084, and the factor load of the questions are greater than 0.6. ($p < 0.001$), model fits well.

4. The Principal's Leadership Scale, including transformational leadership and transactional leadership. The scale was revised from the Multi-Factor Leadership Questionnaire (MLQ), which

included a survey of transformational leadership and transactional leadership. Using the Likert five-point scale, 1 means completely disagree and 5 means completely agree.

The principal's transformational leadership scale consists of 23 questions. The four dimensions are: 1) idealized influence, which means that the leader understands what is important for the future and can effectively convey it; 2) inspirational motivation, means that the leader can improve employees' work expectations by inspiring employees' work motivations; 3) intellectual stimulation, means that leaders can propose new ideas or points of view, and motivate employees to think of ways to complete their work; 4) individualized consideration, means that leaders care about the demands of each employee and can discover the potential of employees, etc. (Avolio, Bass & Jung, 1999). The overall reliability of the scale is 0.97, the reliability of each dimension is higher than 0.87, and the CFA results are $\chi2(181) = 1346.966$, $p<0.01$, CFI = 0.942, TLI = 0.933, RMSEA = 0.079, the factor load value of all of the questions is more than 0.4 ($p < 0.01$), the model fits well.

The principal's transactional leadership scale consists of 10 questions. The three dimensions are: 1) contingency rewards, which means that the leader gives the teacher appropriate rewards and avoids the use of punishments to increase incentives for teachers' work; 2) positive exception management, means that the leader actively monitors a teacher's deviation behaviors, correct them and strengthen rules to ensure that the teacher achieves the goal; 3) negative exception management, in which the leader usually does not interfere with the teacher's behavior, but intervene with contingency punishments or other rectifying actions only when a teacher commits deviation behaviors. The overall reliability of the scale is 0.88, the reliability of each dimension is higher than 0.82, and the CFA results are $\chi2(31)=202.216$, $p<0.01$, CFI=0.974, TLI=0.962, RMSEA=0.073, the factor load value of all of the questions is greater than 0.6. ($p<0.01$), the model fits well.

Data Analysis

This study uses a Hierarchical Linear Model(HLM) to explore the subject issue. We use three-level, multilevel regression models with time at Level 1, teacher at Level 2, and school at Level 3.

Model 1:

First of all, we pay attention to the change of teachers' professional ability and work stress over time after the implementation of the personal system reform. The teacher's professional ability and work stress are used as the dependent variables, and time is added in the first layer model. The complete model is shown in (1). In this specification, we model a teacher's professional ability score (ABILITY$_{tij}$) and work stress score (STRESS$_{tij}$) in year t, for teacher i, in school j ,

as a function of a fixed intercept. TIMEtij specifies the year of the data source (2013, TIMEij=0; 2014, TIMEij=2; 2015, TIMEij=3). γ000 represents the average value of teachers' professional ability or work stress in 2013, γ100 represents the coefficient of teachers' professional ability or work stress as they change over time which is the parameter that needs to be paid attention to in this model. r0ij, r1ij, u00j, u10j and etij are residuals.

$$\text{ABILITY}_{tij} / \text{STRESS}_{tij} = \gamma_{000} + \gamma_{100} * \text{TIME}_{tij} + r_{0ij} + r_{1ij} * \text{TIME}_{tij} + u_{00j} + u_{10j} * \text{TIME}_{tij} + e_{tij} \quad (1)$$

Model 2:

Studies have shown that, teachers can be divided into three categories according to the qualifications and professional titles, they are novice or advanced beginners, capable or skilled teachers, and expert teachers. With the increase of qualifications and the promotion of positions, all viewpoints of teaching behavior will be improved, and the performance of professional ability will be better (Lian, 2004). Moreover, the professional stress of junior or inexperienced teachers will be more serious (Payne & Furnham, 1987), and the professional stress of young teachers is much higher than that of older teachers.

In view of this, this study chooses educational background and professional titles as the control variables that affect teachers' professional ability and professional stress. On the basis of model 1, the teacher control variables are added at the level 2, and the school level variables are added at the level 3, including the school social economic status(SES), the transformational and transactional leadership of principal, so as to explore their impact on teachers' professional ability and work stress. The complete model is shown in (2).

Both SESj and Leadershipj are school-level variables that represent school j's SES level and leadership level (including transactional leadership and transformational leadership), with corresponding effect values of γ001 and γ002; TeaLevelij is a teacher-level variable representing teacher i's professional title and education background at school j, the corresponding effect value is γ010; γ101, γ102, γ110 are the interaction effects of time and school SES, leadership, and teacher level variables.

$$\text{ABILITY}_{tij} / \text{STRESS}_{tij} = \gamma_{000} + \gamma_{001} * \text{SES}_j + \gamma_{002} * \text{Leadership}_j + \gamma_{010} * \text{TeaLevel}_{ij} +$$
$$\gamma_{100} * \text{TIME}_{tij} + \gamma_{101} * \text{TIME}_{tij} * \text{SES}_j + \gamma_{102} * \text{TIME}_{tij} * \text{Leadership}_j + \gamma_{110} * \text{TIME}_{tij} * \text{TeaLevel}_{ij} + r_{0ij} + r_{1ij} * \text{TIME}_{tij} + u_{00j} + u_{10j} * \text{TIME}_{tij} + e_{tij} \quad (2)$$

Model 3:

Based on Model 2, Model 3 adds the interaction item between the principal's leadership and the school's SES, and explores how the principal's transformational leadership and transactional leadership play a role in the different SES level of different schools. The complete model is shown in (3). γ003 represents the effect of the interaction between school SES and principal that is a parameter that requires special attention in this model.

$$\text{ABILITY}_{tij} = \gamma_{000} + \gamma_{001} * \text{SES}_j + \gamma_{002} * \text{Leadership}_j + \gamma_{003} * \text{SES} * \text{Leadership}_j$$
$$+ \gamma_{010} * \text{TeaLevel}_{ij} + \gamma_{100} * \text{TIME}_{tij} + \gamma_{101} * \text{TIME}_{tij} * \text{SES}_j + \gamma_{102} * \text{TIME}_{tij} * \text{Leadership}_j$$

$+ \gamma_{103}*TIME_{tij}*SES*Leadership_j + \gamma_{110}*TIME_{tij}*TeaLevel_{ij} + r_{0ij} + r_{1ij}*TIME_{tij} + u_{00j} + u_{10j}*TIME_{tij} + e_{tij}$ (3)

RESULTS

As a Result of the Reform, Teachers' Professional Ability Has Improved, Yet Their Work Stress Has Increased

According to the results of Model 1, from the perspective of teachers' professional ability, the effect of time is 0.148 (p<0.001), indicating that from 2013 to 2015, as time elapsed, the professional ability of teachers was improved significantly, which means an increase in teachers' professional ability following the implementation of a series of reform measures(shown in Table 2).

As shown in Table 3, from the perspective of teachers' work stress, the coefficient of work stress changing over time is 0.075 (p=0.005), and the teacher's work stress also shows a trend of increase year by year, indicating that the reform not only brings about the improvement of teachers' professional ability, but also a rise in their work stress.

Principals' Transformational Leadership Has Played an Important Role in Improving teachers' Professional Ability and Reducing Their Work Stress.

According to the results of Model 2(shown in Table 2), the influence coefficient of transformational leadership on teachers' professional ability is 0.214 (p=0.023). With the improvement of transformational leadership, the professional ability of teachers is significantly improved. At the same time, for time slope, the influence coefficient of transformational leadership is 0.140 (p=0.091), and the edge at the 0.1 level is significant, indicating that the stronger the teacher's transformational leadership, the faster the teacher's professional ability develops. In other words, the principal's high transformational leadership can not only improve the professional ability of teachers, but also accelerate the development of their professional ability. However, transactional leadership has no significant effect on the average or development speed of teachers' professional ability (-0.018, p=0.876; -0.021, p=0.827). This indicates that principals in a reforming environment should adopt transformational leadership to promote teachers' professional development instead of transactional leadership.

As shown in Table 3,Transformational leadership has a significant positive effect on relieving teachers' work stress (-0.420, p=0.014), one unit increase in the principal's transformational leadership results in 0.42 unit reduction in the teachers' work stress. Transactional leadership has no significant impact on teacher work stress (-0.012, p=0.953). Compared with transactional leadership, the principal's adoption of transformational leadership can ease the stress on

teachers. Judge and Piccolo's(2004) research also found that transformational leadership contributes far more than transactional leadership.

What can't be ignored is that the change of professional ability and work stress over time is no longer significant (-0.186, p=0.126; 0.107, p=0.540) after adding control variables (professional titles and educational background) and school level variables (school's SES, principal's transformational leadership and transactional leadership). This indicates that the reform itself does not directly affect the professional ability and work stress of teachers. It is the change of teachers' condition as a result of the implementation of reform measures that affects the ability and stress.

The Lower a School's Social Economic Status, the More the Principal Should Adopt Transformational Leadership.

According to the results of Model 3(shown in Table 2), with the teacher's professional ability as the dependent variable and after adding the interaction item of transactional leadership and the social and economic status of the school, the main effect of the transformational leadership is not significant judging from the intercept of the teachers' professional ability, and the interactive effect has a significant effect of 0.1 level (0.455, p=0.076), which means that the higher the school SES, the greater the influence of transformational leadership on teachers' professional ability, indicating that transformational leadership plays different roles in different SES backgrounds. The principal's transformational leadership has less impact on schools with low socioeconomic backgrounds than those with high socioeconomic backgrounds. For time slope, the main effect of transformational leadership is the significant positive impact at the 0.1 level (0.672, p=0.085), and the interactive effect is not significant, indicating that the stronger the transformational leadership, the faster the teacher's professional ability develops.

For work stress(shown in Table 3), after adding the interactive item of transactional leadership and the school's SES, neither the main effects or interaction effects of transformational leadership is significant, indicating that transformational leadership has consistent impact on the work stress of teachers regardless of the SES of the school.

Table 4 Results of professional ability

	Fixed Effect	coefficient	Standard error	T-ratio	Approx.d.f	P-value
Model 1						
	intercept					
γ000		3.574	0.023	154.457	33	<0.001***
	Time slope					
γ100		0.148	0.018	8.135	33	<0.001***
Model 2						
	intercept					
γ000		3.794	0.150	25.226	30	<0.001***
SES		-0.160	0.055	-2.895	30	0.007**
transformational		0.214	0.089	2.405	30	0.023*
transactional		-0.018	0.111	-0.158	30	0.876
title		-0.011	0.009	-1.158	510	0.247
edu-background		-0.056	0.048	-1.177	510	0.24
	Time slope					
γ100		-0.186	0.118	-1.573	30	0.126
SES		0.130	0.051	2.532	30	0.017*
transformational		0.140	0.080	1.746	30	0.091+
transactional		-0.021	0.098	-0.220	30	0.827
title		0.018	0.008	2.385	510	0.017*
edu-background		0.079	0.037	2.172	510	0.030*
Model 3						
	intercept					
γ000		3.813	0.149	25.648	30	<0.001***
SES		-2.029	1.020	-1.989	30	0.056+
transformational		-0.547	0.415	-1.319	30	0.197
SES*tranformational		0.455	0.248	1.836	30	0.076+
title		-0.014	0.009	-1.563	510	0.119
edu-background		-0.057	0.047	-1.19	510	0.235
	Time slope					
γ100		-0.203	0.117	-1.735	30	0.093+
SES		1.482	0.920	1.610	30	0.118
transformational		0.672	0.377	1.780	30	0.085+
SES*tranformational		-0.329	0.224	-1.470	30	0.152
title		0.021	0.007	2.858	510	0.004**
edu-background		0.080	0.037	2.194	510	0.029*

Note.Because transactional leadership has no significance in Model 2, remove it from Model 3.
+p<.1. *p<.05. **p<.01. ***p<.001.

Table 5 Results of work stress

	Fixed Effect	coefficient	Standard error	T-ratio	Approx.d.f	P-value
Model 1						
	intercept					
γ000		2.233	0.038	58.857	33	<0.001***
	Time slope					
γ100		0.075	0.025	2.998	33	0.005**
Model 2						
	intercept					
γ000		2.289	0.270	8.494	30	<0.001***
SES		0.105	0.101	1.041	30	0.306
transformational		-0.420	0.162	-2.598	30	0.014*
transactional		-0.012	0.201	-0.059	30	0.953
title		0.003	0.017	0.201	510	0.841
edu-background		-0.024	0.085	-0.286	510	0.775
	Time slope					
γ100		0.107	0.172	0.619	30	0.540
SES		-0.203	0.072	-2.817	30	0.008**
transformational		-0.040	0.113	-0.354	30	0.726
transactional		-0.083	0.138	-0.603	30	0.551
title		-0.003	0.011	-0.247	510	0.805
edu-background		-0.007	0.053	-0.141	510	0.888
Model 3						
	intercept					
γ000		2.268	0.268	8.470	30	<0.001***
SES		2.234	1.842	1.213	30	0.235
transformational		0.429	0.749	0.573	30	0.571
SES*tranformational		-0.517	0.448	-1.155	30	0.257
title		0.006	0.016	0.400	510	0.689
edu-background		-0.023	0.085	-0.275	510	0.784
	Time slope					
γ100		0.100	0.170	0.584	30	0.564
SES		-0.772	1.312	-0.589	30	0.561
transformational		-0.317	0.537	-0.589	30	0.560
SES*tranformational		0.139	0.319	0.436	30	0.666
title		-0.002	0.011	-0.147	510	0.883
edu-background		-0.007	0.053	-0.130	510	0.897

Note. Because transactional leadership has no significance in Model 2, remove it from Model 3.
†p<.1. *p<.05. **p<.01. ***p<.001.

DISCUSSION

A Top-Down Reform Needs *Party Secretary* More

The research shows that the principal's transformational leadership not only promotes teachers' professional ability, but also relieves teachers' work stress. From this perspective, transformational leadership may be a kind of important leadership for the principal, and the role of the *Party secretary* becomes more prominent.

At the stage of deepening reform, make sure the top down reform could be internalized into teachers' value consciousness, it's crucial to the success of the reform. In the bureaucratic system, the principal, being between the county-level educational administrative authority and teachers, plays an important role of transmission and filtering. The principal is the main executor of county-level education policies. Whether the "card game" of reform can be played well is largely dependent on how the principal "plays the cards". When the reform puts stress on teachers, the *Party secretary* takes the role of "stress regulator" or "stress filter". When the reform promotes the development of teachers' professional ability, the *Party secretary* can play the role of an "accelerator". Within a centralized system, the county-level education reform needs the principal to take charge of guiding teachers' value orientation, transform the macro education reform and development goals into school's specific goals , and then implement them in classroom. This is the fundamental path for the reform and development of China's education.

The role of a *Party secretary* emphasizes "Party consciousness" and faithfulness to the Party's assignments, and highlights the combination of organizational goals and personal goals to guide teachers in terms of ideology and values (The Central Organization Department and the Ministry of Education promulgated the "Opinions on Strengthening the Work of Party Construction in Primary and Secondary Schools" in 2016). This is exactly the same as the nature of transformational leadership, which is to present teachers the goals and visions of education and school development, and to clarify the value and significance of education from a more macro perspective. Teachers will be more involved in professional development and more stable under transformational leadership (Smith & Rowley, 2005). The policy of "concurrently shouldering administrative and Party responsibilities" mainly appears in centralized system. However, in the case of decentralization of school autonomy, the decentralization policy of "management by county government and employment by schools" is considerably compatible with the "*Party secretary*" role of principals. In the reform, it is essential to emphasize the "consciousness of the overall situation" for teachers and principals who are important force in the reform. The change in values and consciousness is the key to relieving the stress and improving ability in response to the changes brought by reforms.

The "Failed" Transactional Leadership

The study found that, controlling teachers' professional titles, education background, school's SES and the principal's leadership, teachers' professional ability and work stress no longer change over time, which means that the personnel system reform at the county level cannot directly affect teachers. Changes in teachers' professional ability and stress mainly come from the principal. However, although the principal serves as an indispensable bridge between policy and teachers, the impact on teachers is minimal if the principal chooses transactional leadership behavior. At the school level, transactional leadership is not effective as expected.

Whether it is the county-level personnel system reform or the school-level transactional leadership, the approach is to meet the individual needs of teachers in the context of transaction-oriented leadership through hiring, performance evaluation, compensation, promotion, etc. The results of the study show that transactional leadership has "failed".

With the economic development and deep-going reform, the level of teachers' individual needs may rise continuously, so that it is difficult to motivate teachers by satisfying their lower-level material needs. At the early stage of reform, economic leverage could be used to realize the exchange of interests by satisfying individual needs. However, as the reform deepens, teachers' individual needs change as well, their self-realization should be inspired by more profound value guidance, clearer vision and goals, and the value of school education.

Transformation of leadership of rural school principals

The research shows that the interaction between SES and transformational leadership influences teachers' professional abilities. That is to say, the higher the school's SES level, the stronger the principal's transformational leadership and teachers' professional abilities. It's a kind of virtuous cycle, the strong get stronger. Teachers in high SES schools are well paid, compared with transactional leadership, the *Party secretary*'s transformational leadership takes greater effect to promote teachers' professional abilities. Nevertheless, more attention should be paid to 'the weak' in such a situation.

Rural education is the short slab in China, and the competency of rural teachers needs to be improved urgently. The study found, for schools with low SES (mainly rural schools and weak urban schools), that the principal should take on transformational leadership in the role of "*Party secretary*" to promote the professional ability of teachers.

In the relatively closed environment of rural areas, teachers' visions are corresponding limited (Qin, 2008). The management style of principals is closer to scientific management, rather than modern management modes. Transactional leadership and transformational leadership are not simply conflicting. In the context of change, in order to guide teachers correctly, leadership style of rural principals should transfer from the technical aspect of transactional leadership to the

artistic aspect of transformational leadership. All of these efforts aim to guide and meet teachers' needs at higher levels, and promote their self-realization eventually.

FUTURE RESEARCH

The role of transactional leadership in this study is not prominent, yet the connection between transactional leadership and transformational leadership is proved to be very close in combination with existing studies (Burns, 1978; ; Bass, 1998;Mackenzie, Podsakoff & Rich, 2001). Going forward, we could focus on the mechanism of action between transactional leadership and transformational leadership, and discuss in more detail about how the dimensions of transformational leadership and transactional leadership are functioning properly.

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