

The impact of principals' transformational leadership and teachers' organizational commitment on teachers' teaching effectiveness in ethnic areas of China: Taking gender as a moderator

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ABSTRACT

Guangxi is a border area where ethnic minorities are distributed, with poor economic development foundation, slow growth, relatively traditional, high turnover rate and outdated education. The purpose of the study was to evaluate the impact and to identify the path of principals' transformational leadership on teachers' teaching effectiveness in ethnic autonomous region of China. A regression analysis survey design was adopted to collect the data from the teachers of elementary schools. Based on 5-point Likert Scale of 771 questionnaires from Guangxi Province of China, the survey concluded: (1) principals' transformational leadership, teachers' organizational commitment, and teachers' teaching effectiveness differed significantly by gender and age, (2) principals' transformational leadership significantly influenced teachers' teaching effectiveness, in addition, teachers' organization commitment can partially mediate the effects, (3) gender can moderate the path of principals' transformational leadership to teachers' organization commitment, specifically, male teachers carry more weight. The study findings may serve as a guide for further research on management and leadership of leaders and members in educational organizations.

Keywords: Transformational leadership, organizational commitment, teaching effectiveness, minority, online education.

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INTRODUCTION AND REVIEW OF RELATED LITERATURE

Principals played an absolutely key role in education reform. As a matter of fact, principals' fail to effectively lead the school to develop will inevitably exert negative impacts on their careers.

Transformational leadership has been proven to influence employees' work effectiveness (Koh et al., 2019) and has been deemed the most popular leadership style among principals leadership styles since it was more productive than expected (Burns, 1978; Bass, 1985). In terms of education, it can influence teachers' teaching effectiveness, which is endowed with different meanings and values as it develops in stages. The main purpose of exploring teaching effectiveness is to keep abreast with changes and demands of the times, laying a

more solid foundation for school operation. Accordingly, Wu (2005) pointed out that the ultimate purpose of scholars' dedication to the research on teaching effectiveness was to transform effective schools into excellent ones, with the latter required to be based on effective teaching. However, in today's school context, teachers are not only under the pressure from in-class teaching tasks but also the provision of psychological counselling for students, reassuring the parents when necessary as well as performing any work assigned by the superiors. Additionally, teachers have to make career adjustments for themselves and their families in response to the changes in the economic environment, leading to direct or indirect impacts on teachers' teaching

effectiveness.

In this process, the principals' transformational leadership plays a key guiding role. Leithwood et al. (2020) pointed out that the effects of the school's leaders on students' school performance were only second to the in-class teaching, and students' school performance could be improved by the school leader's influence on the members' motivation, commitment and work environment. Past studies found that the way to motivate teachers to improve teaching effectiveness was to inspire them to formulate teaching strategies through principal leadership (Wu, 2019). In other words, the principal is responsible for leading the teachers to achieve teaching objectives, and the ways to influence them are exactly what this paper intends to explore.

Guangxi is a border area where ethnic minorities are distributed, with a poor economic development foundation, slow growth, and relatively traditional and outdated education facilities and management ideas. Since 2017, the Guangxi government has launched the "13th Five-Year Plan" for the development of its education, in which it pointed out the weak point of Guangxi, restricting the development level of Guangxi as a whole.

According to the statistical data, the turnover rate of teachers was 24.5%, in, the turnover rate of young teachers was relatively high, accounting for 73.3% of the total loss of full-time teachers. Moreover, the more the teachers were educated, the higher the turnover rate would be, leaving motives diversified and turnover dynamics hard to control (Ding, 2014). When it comes to the factors influencing teachers' turnover, it was found by Zhao and Chai (2011) and Zeng et al. (2018) in the structural model discussing the turnover intention of teachers that there is a certain relationship between teaching effectiveness and turnover intention of teachers. The level of teachers' general effectiveness and the development of their commitment level was also verified by Di (2013) by investigating elementary and secondary school teachers. Based on the studies of the foregoing scholars, Hypothesis 1 and Hypothesis 2 were proposed herein:

Hypothesis 1: the transformational leadership of elementary school principals in Guangxi has a significant positive impact on teachers' teaching effectiveness.

Hypothesis 2: teachers' organizational commitment has a significant positive effect on teachers' teaching effectiveness in Guangxi.

According to the relevant studies, the leadership style was correlated to the teachers' organizational commitment, with a certain predictive power (Xie, 2017). In the questionnaire survey on elementary and middle school teachers conducted by Wang et al. (2013), it was verified that transformational leadership exerted positive

impacts on the school organization climate (Wang, 2020). Hu and Xiang (2020) conducted an empirical study on transformational leadership and teachers' organizational commitment in the organizational atmosphere of colleges and universities and also concluded that there was a significant positive impact between them. Based on past research, this study proposed the third hypothesis:

Hypothesis 3: The transformational leadership of elementary principals in Guangxi has a significant positive impact on teachers' organizational commitment.

Furthermore, based on the researcher's experience, male and female teachers had different perceptions of principals' leadership to yield their organizational commitment. Even though it lacks sufficient related research to support the experience; this research still considered it worthy to explore the gender effect on the former mediation mechanism. Therefore, this study proposed the fourth hypothesis:

Hypothesis 4: Gender is a moderator on the path of the transformational leadership of elementary principals in Guangxi to teachers' organizational commitment.

The conceptual framework of this study is formulated based on the above three hypotheses as shown in Figure 1.

On the whole, the current research on the pail-wise variables such as principals' transformational leadership, teachers' organizational commitment and teachers' teaching effectiveness has been relatively mature. However, from the literature reviewed, it was learned that there were few studies investigating elementary school teachers in minority areas from these three perspectives. On the premise of the teaching quality of Guangxi being improved, this study investigated the elementary school teachers there, explored the relationship among teachers' perception of principals' transformational leadership, teachers' organizational commitment and teachers' teaching effectiveness and maintained the view that teachers' organizational commitment could be the mediating variable between teachers' perception of principals' transformational leadership and teachers' teaching effectiveness.

RESEARCH DESIGN

The research used quantitative methodology specifically by survey method. The questionnaire was collected among the elementary school teachers in Guilin City, north in Guangxi, Nanning City, centred in Guangxi and Beihai City, south in Guangxi. The data analysis technique was by applying descriptive statistics, variation analysis and regression analysis. The foregoing three cities are the largest in the northern, central and southern

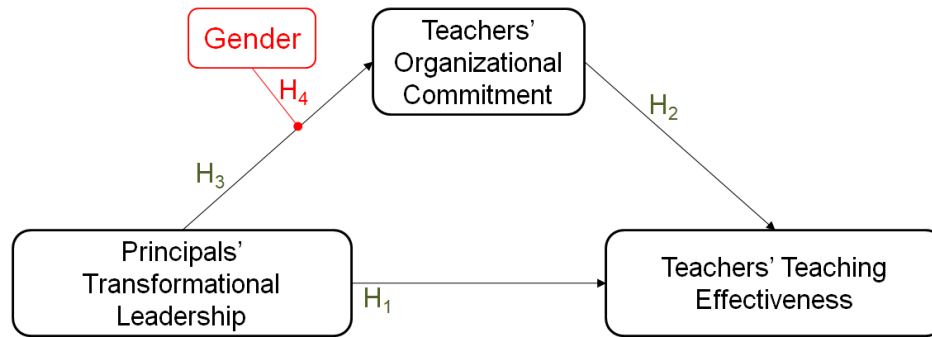


Figure 1. Conceptual framework.

parts of Guangxi, respectively, making the samples of the study representative enough. The questions on the Principals' Transactional Leadership Scale in the questionnaire were adapted by referring to the questionnaire questions of MLQ-5X, Lin (2001), Chang (2020), Cai (2016) and Ross and Gray (2006); the questions of Teachers' Organizational Commitment Scale were adapted by referring to the questionnaire questions of Thien (2014) and Mowday (1979); and the questions of Teachers' Teaching Effectiveness Scale were adapted by referring to the questionnaire questions of Gibson and Dembo (1985), Lin (2022), Chen (1997), Zhang (1999) and Cai (2001). All questionnaire questions were subject to a validity test by three experts before being compiled into electronic questionnaires and sent to the elementary school teachers in three cities for filling. A total of 835 questionnaires were recovered, with 771 valid ones and a validity rate of 92.3%, after screening and removing the invalid ones.

Data analysis

The statistical analysis results of the questionnaires are mainly divided into four parts, i.e. descriptive statistics, reliability analysis, variation analysis and regression analysis.

Analysis results of descriptive statistics of the sample population

In 771 valid samples of this study, 3 background variables, including region, gender and age, as shown in Table 1. According to the descriptive statistics analysis result of background variables: with respect to region, 257 elementary teachers in the northern part of Guangxi were surveyed, accounting for 33.3% of the total samples; 359 elementary teachers in the central part of Guangxi were investigated, taking up 46.6% of total samples; and 155 elementary teachers in the southern part of Guangxi were researched, occupying 20.1% of total samples.

These proportions were roughly close to the distribution of elementary schools in the Guangxi Zhuang Autonomous Region. In terms of gender, there were 338 female participants and 433 male participants, contributing to 43.8% and 56.2% of the total participants, respectively. The proportion of male and female elementary school teachers in Guangxi Zhuang Autonomous Region was very close, which was indeed different from that in other provinces as recorded. In terms of age, 676 (87.7%) were aged 35 and below, and 95 (12.3%) were aged 36 and above. In view that the elementary school teachers in Guangxi Zhuang Autonomous Region were generally young and new schools have been established in recent years, most of the teachers employed were young.

Reliability analysis

After item analysis, factor analysis and deletion of items, the questionnaire data was analyzed by Cronbach's α coefficient for the reliability test and internal consistency test on each dimension and the whole of the questionnaire as shown in Table 2. The analysis results show that the internal consistency of each variable and its dimension is significant.

Results of variation analysis

The gender differences in the scores of variables and dimensions are shown in Table 3. The variation analysis involved the observation of differences in principals' transformational leadership, teachers' organizational commitment and teachers' teaching effectiveness in each background variable. The results showed that there was a significant difference in gender, age and whether to hold administrative positions concurrently. First of all, among the four dimensions of perception of principals' transformational leadership, male teachers scored significantly higher than female teachers in the three dimensions of development vision, charm influence and

Table 1. Descriptive statistical analysis of samples ($N = 771$).

Variables	Items	Frequency	Percentage
Region	North	257	33.3
	Center	359	46.6
	South	155	20.1
Gender	Female	338	43.8
	Male	433	56.2
Age	35 and below	676	87.7
	36 and above	95	12.3

Table 2. Reliability analysis of questionnaire ($N = 771$).

Variables	Dimensions	M	SD	α Coefficient of Each Dimension	α Coefficient of Scale
Transformational leadership	Development vision	4.220	0.418	.373	.824
	Interpersonal care	3.786	0.519	.614	
	Charm influence	4.130	0.513	.629	
	Intelligence inspiration	4.161	0.448	.551	
Organizational commitment	Organizational identification	4.288	0.432	.430	.777
	Willingness of work	4.164	0.459	.426	
	Retention intention	3.975	0.525	.646	
Teaching effectiveness	Class management	4.293	0.406	.496	.855
	Effective teaching	4.228	0.437	.477	
	Teaching practice	4.323	0.401	.532	
	Study performance	3.985	0.478	.579	

Table 3. Effects of gender ($N = 771$).

Dimensions/Variables	Female (N = 338)		Male (N = 433)		Sig.
	M	SD	M	SD	
Development vision	4.154	0.415	4.271	0.413	.000
Interpersonal care	3.745	0.502	3.818	0.531	.053
Charm influence	4.036	0.559	4.204	0.461	.000
Intelligence inspiration	4.085	0.471	4.221	0.421	.000
Principals' transformational leadership	4.000	0.402	4.111	0.393	.000
Organization identification	4.184	0.496	4.369	0.355	.000
Willingness to make efforts	4.146	0.457	4.179	0.461	.313
Retention intention	3.902	0.554	4.032	0.495	.001
Teachers' organizational commitment	4.058	0.430	4.171	0.378	.000
Self-effectiveness	4.257	0.456	4.320	0.360	.039
Class management	4.193	0.429	4.256	0.442	.048
Effective teaching	4.263	0.404	4.371	0.393	.000
Teaching practice	3.921	0.505	4.034	0.450	.001
Study performance	4.162	0.371	4.251	0.332	.001
Teachers' teaching effectiveness	4.154	0.415	4.271	0.413	.000

intelligence inspiration, which was probably because of the principals' access to more opportunities and the table culture. Most elementary principals in Guangxi were male, allowing male teachers to have more opportunities to communicate and eat with the principal; moreover, more training opportunities were available for male teachers. Due to the poor transportation in Guangxi, it usually took more than a few days to go out for training, making it inconvenient for female teachers, especially those with children. However, male and female teachers' perception of interpersonal care from the principal was not significantly different, probably due to the traditional leadership style, the school's absence of extra funds, and thus the lack of care for teachers. Generally speaking, Guangxi was a province with less gender equality and higher importance attached to male teachers, therefore the higher score of perception of principals' transformational leadership.

Secondly, there are significant differences in the score of teachers' organizational commitment by gender, especially in the two dimensions of organizational identity and retention intention. It might be because male teachers were much influenced by the leader, thus the higher organization identification. Besides, in consideration of poor economic conditions and few employment opportunities, male teachers had to support their families, which was the reason for higher retention intention. However, the willingness to make efforts was not significantly different by gender, suggesting that male and female teachers shared the same occupational values for their dedication to work.

Lastly, when it comes to teaching effectiveness, male teachers' scores in class management, effective teaching, teaching practice and study performance were significantly higher than those of female teachers, indicating that male teachers had higher management authority and training opportunities than female teachers in Guangxi. It was worth noting that the scores of study performance were sharply lower than those of other dimensions, showing that study performance was one of the biggest problems of elementary education in Guangxi.

In this study, the independent-sample t-test was used to analyze the differences in the scores of transformational leadership, teachers' organizational commitment, and teachers' teaching effectiveness among different age groups of teachers, teachers aged over 36 scored significantly higher than those aged fewer than 35, as shown in Table 4. The result indicated that senior teachers paid more attention to school development probably because they were less capable or willing to change their jobs or schools and expected the schools where they worked could keep moving in the right direction. However, age had no significant impact on interpersonal care, charm influence, or intelligence inspiration. This was probably because they were accustomed to the leadership cultures of elementary schools in Guangxi, making them pay little attention to

the long-term benefit systems. To sum up, the principals' transformational leadership scored relatively high on the whole, showing no difference due to the age of teachers.

Age exerted significant effects on the scores of variables and dimensions of teachers' organizational commitment. Senior teachers over 36 years old scored sharply higher than those younger teachers under 35 years old in terms of organization identification, willingness to make efforts and retention intention, indicating that senior teachers were less capable or willing to change their jobs or schools and cherished their current job. As a result, more efforts were made for the schools they worked for now.

Moreover, as for teachers' teaching effectiveness, younger teachers over 36 years old scored significantly higher than those under 35 years old in four dimensions, demonstrating that senior teachers' experience in class management, in-class teaching abilities, abilities to apply the theories to practical teaching and teaching outcomes of urging students to learn were remarkably more excellent than those of younger teachers. In other words, the ability and effectiveness of senior teachers in teaching could be a model for younger teachers to learn from.

Regarding the effect caused by region, the result of ANOVA showed that there were no significant differences among research variables and dimensions.

From the former findings, the useful variable for further analysis is gender, because only gender made a difference to all research variables.

Results of regression analysis

Firstly, in this study, the Person Correlation Coefficient was used to analyze whether and to what extent the three variables were correlated. The results of the data analysis showed that there was a significant positive correlation among the three variables as shown in Table 5.

Secondly, regression analysis was conducted to further explore the explanatory and predictive relationship between variables on the basis of Pearson Correlation analysis. Baron and Kenny's (1986) Four-step Method was applied to understand the impacts of principals' transformational leadership on teachers' organizational commitment, principals' transformational leadership on a teachers' teaching effectiveness, teachers' organizational commitment on teachers' teaching effectiveness as well as the mediating role of teachers' organizational commitment between principals' transformational leadership and teachers' teaching effectiveness. The test results are shown in Table 6.

In the first step, whether the independent variable, principals' transformational leadership, could significantly predict the mediating variable, teachers' organizational commitment, was examined in Model 1 with the

Table 4. Effects of age ($N = 771$).

Dimensions/Variables	35 years old or below (N = 676)		36 years old and above (N=95)		Sig.
	M	SD	M	SD	
Development vision	4.198	0.421	4.374	0.363	.000
Interpersonal care	3.789	0.504	3.767	0.621	.741
Charm influence	4.127	0.512	4.158	0.523	.578
Intelligence inspiration	4.156	0.449	4.202	0.448	.348
Principals' transformational leadership	4.056	0.396	4.108	0.430	.235
Organization identification	4.270	0.435	4.413	0.389	.003
Willingness to make efforts	4.133	0.459	4.389	0.395	.000
Retention intention	3.959	0.530	4.093	0.476	.019
Teachers' organizational commitment	4.100	0.410	4.277	0.339	.000
Self-effectiveness	4.270	0.400	4.457	0.408	.000
Class management	4.212	0.448	4.342	0.328	.001
Effective teaching	4.305	0.397	4.453	0.413	.001
Teaching practice	3.959	0.470	4.171	0.498	.000
Study performance	4.191	0.348	4.361	0.346	.000
Teachers' teaching effectiveness	4.198	0.421	4.374	0.363	.000

Table 5. Pearson's correlation analysis of variables.

	1	2	3
1. Principals' transformational leadership	—		
2. Teachers' organizational commitment	.809***	—	
3. Teachers' teaching effectiveness	.734***	.773***	—

Table 6. Baron and Kenny's four-step regression analysis.

Dependent variables	Teachers' Organizational Commitment		Teachers' Teaching Effectiveness	
	Model 1	Model 2	Model 3	Model 4
Independent variables				
Principals' Transformational Leadership	0.809***	0.734***		0.314***
Teachers' Teaching Effectiveness			0.773***	0.519***
R ²	0.654	0.538	0.598	0.632
Adj R ²	0.653	0.538	0.597	0.631
F	1453.010***	896.449***	1141.884***	658.400***
Significance F	.000	.000	.000	.000

application of linear regression analysis. This finding also concluded the validity of hypothesis 3.

According to the testing result, the independent variable had a significant positive impact on a mediating variable, teachers' organizational commitment, with an R² value of .654, a kind of good regression model with high explanatory power. In the second step, the standardized regression coefficients of Model 2 between the independent variable, principals' transformational leadership, and the dependent variable, teachers' teaching effectiveness, were tested. It was found from

Model 2 that the regression coefficient of the independent variable, principals' transformational leadership to the dependent variable, teachers' teaching effectiveness, was of the significance value .734, with an R² value of .538, a kind of good regression model. The finding also supported hypothesis 1.

In the third step, the standardized regression coefficients of the mediating variable, teachers' organizational commitment, on the dependent variable, teachers' teaching effectiveness, were tested in Model 3. It was found from Model 3 that the regression coefficient

of the meditating variable, teachers' organizational commitment to the dependent variable, and teachers' teaching effectiveness was of significance .773, with an R^2 value of .598, a kind of good regression model. The finding indicated that hypothesis 2 was established.

In the last step, Model 4 took principals' transformation leadership and teachers' organizational commitment as independent variables to predict the dependent variable, teachers' teaching effectiveness. The results showed that the predictive power of principals' transformational leadership on teachers' teaching effectiveness was .314, which was smaller than .734 in Model 2, but still significant. Although the predictive power of teachers' organizational commitment on the teachers' teaching effectiveness decreased from .773 in Model 3 to .519, it was still significant. The R^2 value of the regression model

was .632, a kind of good regression model with high explanatory power. From the results in Model 4, it could be seen that the predictive power of principals' transformational leadership on teachers' teaching effectiveness declined from .734 to .314, which was still of significance after the independent variable, teachers' organizational commitment, was added. This suggested that teachers' organizational commitment played a meditating role in the influence of principals' transformation leadership on teachers' teaching effectiveness.

The Four-step Method was used to test the change of the predictive power of principal transformation leadership on teachers' teaching effectiveness before and after adding the mediating variable, teacher organizational commitment, as shown in Figure 2.

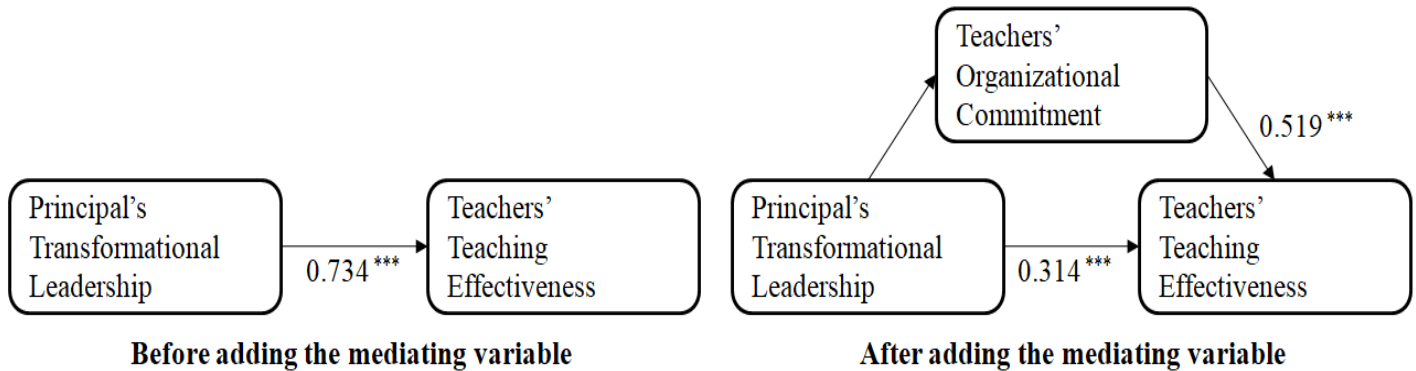


Figure 2. Comparison of adding meditating effect test.

This study further tested the mediating effect of teachers' organizational commitment on principals' transformational leadership and teachers' teaching effectiveness with the Sobel method. The results showed that the mediating effect was significant (Sobel's $z = 13.101$, $p = .000$), indicating that principals' transformational leadership affected teachers' organizational commitment and then teachers' teaching effectiveness. The standardized effect size of the mediating effect was $d = 0.420$, demonstrating that every additional standard deviation of the principals' transformational leadership would increase teachers' teaching effectiveness by 0.420 standard deviations by influencing teachers' organizational commitment, as shown in Table 7.

The results tested with Sobel Method were the same as those tested with Four-step Method, confirming that teachers' organizational commitment had some mediating effect on the influence of principals' transformational leadership on teachers' teaching effectiveness.

Table 7. Sobel Test of Principals' Transformational Leadership → Teachers' Organizational Commitment → Teachers' Teaching Effectiveness.

Effect Size d	Sobel's z	p
0.420	13.101	.000

Lastly, to examine the moderating effect of gender on the mediating model, this research, referring to the test method of moderating variables proposed by Hayes (2018), adopted Hayes' PROCESS v3.5 Module 7 to analyze the overall power of gender effect on the path of model 1 of the mediating mechanism. The regression effect is shown in Table 8.

The result showed that the sign of interaction item $X*W$ was negative, which means the moderating effect of female teachers is lower than the moderating effect of male teachers. The effect of the moderated mediation model also verified hypothesis 4, and so far the conceptual framework was established.

Table 8. Summary of regression results.

	Y				M			
	β	s.e.	t-value	p-value	β	s.e.	t-value	p-value
X	0.276	0.033	8.426	.000	1.081	0.070	15.367	.000
W					0.716	0.176	4.071	.000
X*W					-0.171	0.043	-3.964	.000
M	0.451	0.032	13.951	.000				
R			.795				.813	
R ²			.632				.662	
F		F(2,768) = 658.400				F(3,767) = 499.787		

X: Principals' Transformational Leadership

Y: Teachers' Teaching Effectiveness

M: Teachers' Organizational Commitment

W: Gender

DISCUSSION

The questionnaire surveys of the study were carried out among the elementary school teachers in Guangxi Zhuang Autonomous Region (GZAR); the questionnaire contained three variables, including principals' transformational leadership, teachers' organizational commitment and teachers' teaching effectiveness, aiming at understanding the relationship among them. It could be learned by testing the questionnaire survey results with regression analysis that principals' transformational leadership influenced teachers' teaching effectiveness through teachers' organizational commitment. The studies of Li (2009) and Jian (2014) both found that elementary school teachers' perception of principals' transformational leadership was medium-high. The studies of Xu (2010) and Lin (2010) also concluded that teachers had a high recognition of organizational commitment. Meanwhile, the studies conducted by Zhang and Fan (2022), Chen (2016) and Kieres (2012) targeting different groups of objects all concluded that principals' transformational leadership could effectively influence teachers' organizational commitment. The more the leaders involved in transformational leadership, the more satisfied the teachers would be with their work, suggesting a significant relationship between teachers' work commitment and transformational leadership style.

Furthermore, from the questionnaire survey subject to regression analysis, it could be seen that organizational commitment would significantly and positively influence teaching effectiveness. Lin (2010) found that private school teachers mattered in personal performance. Therefore, variables of organizational climate or job satisfaction could easily affect organizational commitment; in the organizational climate of public schools where teachers worked, job satisfaction was less correlated to organizational commitment due to the generous welfare system, high job security and little change in jobs. However, Zamin and Hussin (2021) revealed in their research that organizational commitment

and job satisfaction would influence personal work performance. Enthusiasm, dedication and commitment were necessary for teaching, and teachers played an important part in the promotion of education in the education system as evidenced by enhancing students' abilities with school work. The commitment was highly related to teachers' teaching abilities, and teachers' commitment contributed remarkably to the future of both schools and students. In addition, Susilowati (2013) showed that organizational commitment and individual ability also had quite positive effects on teachers' teaching performance through study organization. What's more, the teachers in this study scored high in terms of teaching effectiveness, suggesting that most teachers felt good about their teaching effectiveness. It was also verified through the questionnaire survey that teachers' organizational commitment would positively affect teaching effectiveness, and their identification, intention of efforts as well as retention willingness would promote teaching effectiveness. Through regression analysis, Xu (2010), Chen and Li (2011), and Lin and Lin (2012) pointed out that organizational commitment could effectively predict teaching effectiveness. It was also specified by Purwanto (2021) that in addition to the principals' leadership style, teachers' teaching effectiveness was also influenced by organizational culture and teachers' confidence. Therefore, the improvement of teachers' teaching effectiveness could be started by establishing organizational cultures and adopting transformational leadership.

It could be discovered from the foregoing analysis that teachers' organizational commitment would affect their teaching effectiveness, and principals' transformational leadership would also influence teachers' teaching effectiveness. The overall analysis showed that while teachers' organizational commitment affected their teaching effectiveness, the principal was also improving his/her transformational leadership; additionally, the overall organizational climate and commitment were correspondingly enhanced with the principals'

transformational leadership influencing teachers' teaching effectiveness.

Conclusion

First of all, this study elaborated on the status quo of elementary school teachers' perception of principals' transformational leadership, teachers' organizational commitment and teachers' teaching effectiveness through data analysis. In the second place, it sorted out the differences of background variables in each variable of this study and then discussed the correlation of each variable. Finally, this paper examined the influence of principals' transformational leadership on teachers' teaching effectiveness and principals' transformational leadership on teachers' organizational commitment, thus further exploring the mediating role of teachers' organizational commitment in the impact of principals' transformational leadership on teachers' teaching effectiveness. Finally, the moderating role of gender concludes the moderated mediation model—the conceptual framework. The important conclusions of this study could be summarized as follows:

1. Some background variables influenced teachers' perception of principals' transformational leadership, teachers' organizational commitment and teachers' teaching effectiveness: (1) there was a significant difference among teachers in the perception of principals' transformational leadership, teachers' organizational commitment and teachers' teaching effectiveness by gender; (2) there was no significant difference in the perception of principals' transformational leadership by the teacher by age, but there was a significant difference in teachers' organizational commitment and teaching effectiveness; (3) teachers holding no administrative positions concurrently had a significantly better perception of principals' transformational leadership, teachers' organizational commitment and teachers' teaching effectiveness than those did.
2. There was a significant positive correlation among principals' transformational leadership, teachers' organizational commitment and teachers' teaching effectiveness, from which, it could be seen that teachers' perception of principals' transformational leadership, teachers' organizational commitment and teachers' teaching effectiveness had the same interactive relationship.
3. Teachers' organizational commitment served as the mediating variable to some extent while principals' transformational leadership was influencing teachers' teaching effectiveness. The mediating effect had been confirmed as correct through the Sobel test.
4. Gender could moderate the regression effect of principals' transformational leadership on teachers' organizational commitment. The moderating effect of

male teachers was greater than female teachers.

RECOMMENDATIONS

Finally, several suggestions are offered based on the conclusions here:

1. The sound interactions can be strengthened through the mentoring system. From the variation analysis of teachers' background variables, it can be seen that there are significant differences in organizational commitment and teaching effectiveness among teachers of different ages. During the professional growth of teachers, the mentoring system has been an important model. Senior teachers who can actively guide younger teachers can not only improve their own sense of accomplishment but also improve the organizational commitment of young teachers. Based on the principle of teaching and learning, can also have a positive impact on the teaching efficiency of all teachers.
2. Carry out in-service training for principals to cultivate their transformational leadership ability. Principals with authoritative leadership can only make teachers obey, leading to low organizational commitment of teachers to the school. This is not uncommon for Guangxi. Therefore, the education bureau at the city and country levels can consider conducting a regular workshop for cultivating principals' transformational leadership by inviting experts and scholars to deliver a keynote speech on transformational leadership expertise and the application of principals. In this way and through the combination of theory and practice, the principal can enhance the know-how of transformational leadership.
3. Include the teachers' organizational commitment and teachers' teaching effectiveness as indicators for principals' performance appraisal. The results of this study suggest that principals' transformational leadership can improve teachers' organizational commitment and teaching effectiveness. In order to improve teachers' organizational commitment and teaching effectiveness, the principals' performance appraisal can be taken into account. The improvement of principals' transformational leadership will, directly and indirectly, improve teachers' organizational commitment and teaching effectiveness.

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