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# Factors Affecting Teacher Performance and Loyalty of National Training Program in Yunnan, China

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## Abstract

**Purpose:** National Training Programme (NTP) an important initiative to promote teacher development in China. Therefore, this research aims to determine critical factors impacting teacher performance and loyalty in Yunnan, China. The conceptual framework presented cause-and-effect relationships between Leadership (LE), Emotion (EM), Commitment (CO), Knowledge (KN), Climate (CL), Loyalty (LO), and Performance (PE). **Research design, data, and methodology:** The researcher adopted a quantitative technique (n=500) to administer the questionnaire to primary and secondary school teachers in Yunnan Province, China. A non-probability sampling includes judgmental, quota, and convenience sampling to collect data. Before conducting the large-scale questionnaire, the researcher administered Item-Objective Consistency Index (IOC) and a pilot test to 50 respondents. The researcher applied confirmatory factor analysis (CFA) and structural equation modeling (SEM) to conduct the data analysis, including model fit, reliability, and construct validity. **Results:** The results show that leadership and emotion significantly impact commitment, teacher performance, and loyalty. Knowledge and climate have a significant impact on teacher performance. Climate strongly impacts teacher performance, followed by commitment and knowledge. **Conclusions:** This study suggests improving the level of training leadership of training leads by developing targeted measures to optimize resourcing options, spending resources on forming professional communities, and optimizing the proportion of investment.

**Keywords:** Leadership, Knowledge, Climate, Loyalty, Performance

**JEL Classification Code:** E44, F31, F37, G15

## 1. Introduction

Health is a perfect state of mind and body without the Organizational members change their behavior and beliefs by perceiving the behavior of supervisors and colleagues in the organization, especially those with leadership

responsibilities. Members with self-stereotyped emotions tend to identify and reach commitments and exhibit behaviors characteristic of organizational prototypes (Zapf, 2002). The members of an organization tended to reach commitments and enjoyed engaging in role-appropriate emotional labor when their emotions identified strongly with

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the organization's role expectations (Yousef, 2002). High-quality social identity manifested as positive emotions in organizational members, which increased their confidence and action against stressful situations (Allen & Meyer, 1990).

Culture and organizational commitment significantly and strongly impact performance (Xenikou & Simosi, 2006). By reaching commitment, organizational members demonstrate loyalty to the relationship with the organization and are willing to take action to maintain the relationship (Stinglhamber et al., 2002). Commitment centered on social interchange and the commitments reached by organizational members affect their performance and loyalty. They socially exchange their behavior and attitudes with the resources provided by the organization (Meyer et al., 1993). The main difference between these types of exchange relationships was the mutual social trust and the resulting commitment of individuals to establish and maintain exchange relationships (Jaros et al., 1993).

Commitment centered on social interchange, and the commitments reached by organizational members affect their performance and loyalty (Lee & Ahmad, 2009). They socially exchanged their behavior and attitudes with the resources provided by the organization. The main difference between these types of exchange relationships was the mutual social trust and the resulting commitment of individuals to establish and maintain exchange relationships (Rhoades et al., 2001). By reaching commitment, organizational members demonstrate loyalty to the relationship with the organization and are willing to take action to maintain the relationship (Meyer et al., 1993).

Organizational members were multiple entities in the organization with different responsibilities (Forgas & George, 2001). Organizational members perceive and receive organizational information by observing and listening. Organizational members respond to expectations and standards (Correa et al., 2007). The organizational climate mandated and motivated them to respond and perform positively toward the organization's performance goals. In an organization, knowledge affects the performance of its members (Davenport & Prusak, 1998). They allow expertise to influence professionals more, prompting them to generate new ideas and enhance their performance (Bass, 1985).

In 2010, the Chinese Ministry of Education and Finance launched the National Training Programme (NTP). By 2020, the National Training Programme had offered training services to primary and secondary school teachers nationwide for 10 years. In total, some 16.8 million teachers from 31 provinces, municipalities, and autonomous regions had participated in the NTP, including some 15.74 million participants (94%) in the Midwest Programme and the National Training Programme for Early Childhood Teachers, and over 60% of participants from the Midwest Region in the

Model Training Programme. Consequently, the researcher considered the National Training Programme (NTP) an important initiative to promote teacher development in China. This study aimed to investigate the factors that influence the performance and loyalty of teachers in four schools of Yunnan, China, by the National Training Programme (NTP) and to explore the operational mechanisms of the NTP.

## 2. Literature Review

### 2.1 Leadership

Jaruwanakul (2021) defined "leadership" as the power to influence people to work voluntarily and enthusiastically to achieve organizational goals. Rhoades et al. (2001) found a link between leadership and organizational commitment. Pradhan et al. (2018) argued that according to the Social Identity Theory of Leadership (SITL) (Hogg, 2001), the leadership of managers in an organization influences the social learning and performance of its members. Allen and Meyer (1990) developed a conceptual framework for leadership to influence organizational commitment. Their study used structural equation modeling (SEM) to measure and analyze the multivariate relationships of the conceptual model. The results showed that leadership significantly affected organizational commitment in training. Rhoades et al. (2001) supported the use of the three-component model of organizational commitment as a basis for constructing a conceptual framework for related research. Meyer et al. (1993) also used this model to study the relationship between leadership, commitment, and performance. Several studies examined the contingent relationship between leadership and commitment and developed the hypothesis that leadership has a significant effect on commitment, manifested in the following hypothesis:

**H1:** Leadership has a significant impact on commitment.

### 2.2 Emotion

Hargreaves (2000) defined "emotion" as a regulative behavior, i.e., the ability of people to solve problems by identifying, using, and managing their own or others' regulative behaviors. Emotion significantly influences the level of psychological resources of organizational members, especially commitment, efficacy, and expectation (Chiva & Alegre, 2008). The emotion of members in organizations significantly influences their perceptions, decisions, judgments, behaviors, and commitment. Organizational members with positive emotions were more likely to believe in the value of organizational change initiatives and their ability to meet new challenges (Steigenberger, 2015). In addition, they were more likely to believe that they would

develop positively in the organization and achieve organizational commitment. Members with self-stereotyped emotions tend to identify and reach commitments and exhibit behaviors characteristic of organizational prototypes. Based on the above literature, the following research hypotheses emerged from this paper.

**H2:** Emotion has a significant impact on commitment.

### 2.3 Commitment

Latham (2007) defined “commitment” as a psychological state and a social construct. Commitment connects individuals to one or more organizational goals and influences their actions. The commitment generated in an organization is not just a passive loyalty but also includes a dynamic relationship between the employee and the organization, representing a willingness to put in all the effort and performance for the organization's success (Weiming et al., 2011). The motivation and performance of organizational members should be included in the measurement. The achievement of higher levels of commitment by organizational members would affect their loyalty and performance (Avolio et al., 2004). They would demonstrate behavior to achieve organizational goals and a desire to remain in the organization. Therefore, the following research hypotheses emerged from this paper.

**H3:** Commitment has a significant impact on performance satisfaction.

**H4:** Commitment has a significant impact on loyalty.

### 2.4 Loyalty

Relationship quality within the organization, such as organizational commitment, climate, and knowledge, positively influenced the loyalty of organizational members; organizations with good relationship quality influenced relationship commitment; higher relationship commitment was associated with higher loyalty, and good communication climate and knowledge transfer within the organization positively influenced loyalty. Increasing the interaction between training leads and trainees facilitates the achievement of organizational commitment, which influences the loyalty of organizational. This commitment convinced organizational members that they had the opportunity for better career development Tweephoncharoen & Vongurai, 2020). Loyalty reflected the level of trust that organizational members had in the organization. Loyalty increased organizational members' resistance to negative word-of-mouth that was detrimental to the organization. Loyal organizational members tend to be less sensitive to financial income and have a reduced risk of leaving due to higher financial inducements. The commitment had a significant positive impact on loyalty. The commitment-trust

theory (CTT) suggests that members of an organization achieve commitment in order to achieve organizational goals and that this commitment has a direct and significant effect on loyalty (Weiming et al., 2011).

### 2.5 Climate

Baer and Frese (2003) defined “climate” as the collection and overview of an organization's various environments, people, and resources. The organizational climate was within the realm of social cognitive theory and had a significant causal effect on the performance of organizational members. Organizational climate influences organizational members' performance. The climate in an organization influences the performance of its members, and this mechanism of operating based on individual perceptions was consistent with social cognitive theory (SCT), so it was appropriate to collect assessment data at the individual level. The organizational climate was important for operating the relationship between HRM and organizational performance. It was a key factor in shaping the relationship between HRM and organizational performance (Xenikou & Simosi, 2006). Above assumption leads to a proposed hypothesis that:

**H5:** Climate has a significant impact on performance.

### 2.6 Knowledge

Mcadam and Reid (2000) defined "knowledge" as one of the organization's most important strategic resources. They argued that in an era of privatization, liberalization, and globalization, knowledge management had become a necessity for the survival of the public sector. The impact of knowledge in training on the performance of organizational members. They included knowledge accessibility, intensity, and use (Felin & Hesterly, 2007). The variable of knowledge had a significant impact on the operational mechanism by which training influenced employee performance. The Organizational knowledge Creation Theory by finding that expertise was closely linked to professionals and therefore emphasized the importance of allowing expertise to influence professionals more, prompting them to generate new ideas and enhance their performance (Correa et al., 2007). Based on the above discussion, the following hypothesis is indicated:

**H6:** Knowledge had a significant impact on performance.

### 2.7 Performance

Jamal (2007) defined “performance” as the efficiency and effectiveness with which individuals complete their work tasks with the available resources. He considered performance as a combination of achievement and effectiveness, the behavior, manner and results of work over

a certain period, and its objective impact. Performance is the level of involvement of an organization's members in various organizational activities. Borman and Motowidlo (1997) found that performance was the efficiency of the incumbent, mainly in terms of his activities that contributed to the organization's technical core. Judge and Ferris (1993) found that performance was very important in the organization's human resources. Inayatullah and Jehangir (2013) concluded that work environment, motivation, and workability determine a person's performance. Enhancing the performance of organizational members involves learning new knowledge from activities such as training provided by the organization and, more importantly, reconfiguring existing knowledge to create new opportunities to enhance job performance (Mohd Adnan & Valliappan, 2019).

### 3. Research Methods and Materials

#### 3.1 Research Framework

The research framework is built upon previous studies (Cook & Emerson, 1978; Hogg, 2001; Mowday et al., 1982; Nonaka, 1994; Tajfel & Turner, 1979). The researcher has developed a conceptual framework for this study, described in Figure 1. Key variables include Leadership (LO), Emotion (EM), Commitment (CO), Loyalty (LO), Knowledge (KN), Climate (CL), and Performance (PE).

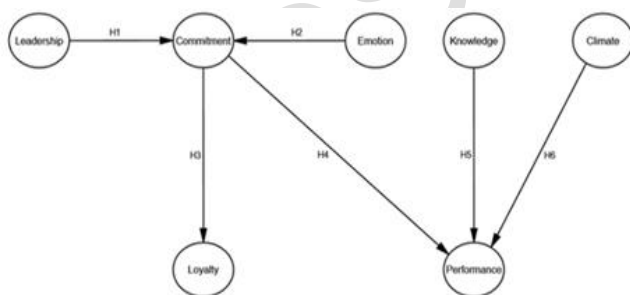


Figure 1: Conceptual Framework

- H1:** Leadership has a significant impact on commitment.
- H2:** Emotion has a significant impact on commitment.
- H3:** Commitment has a significant impact on performance satisfaction.
- H4:** Commitment has a significant impact on loyalty.
- H5:** Climate has a significant impact on performance.
- H6:** Knowledge had a significant impact on performance.

#### 3.2 Research Methodology

The researcher distributed questionnaires to the target population through an online questionnaire platform The

questionnaire for this study consisted of three sections. The first section consisted of screening questions. The second section was a 5-point Likert scale for all variables. The scale items measured the six hypotheses of this study. The measures ranged from (1) strongly disagree to (5) strongly agree. The third sections were demographic questions. These questions included gender, age, and grade level of teaching. Before conducting the large-scale questionnaire, the researcher administered a pilot test to 50 respondents. The questionnaire used for the pilot test passed the expert's Item-Objective Consistency Index (IOC) score.

Using Cronbach's Alpha method, the questionnaire for this study passed validity and reliability tests (Hartog & Verburg, 2004). The researcher distributed the questionnaires to the target respondents and received good feedback from 500 responses. In order to test the accuracy and validation of the convergence, confirmatory factor analysis (CFA) measures validated the fit of this study's conceptual framework and ensured the model's validity and reliability. Based on these efforts, the researcher examined the causal relationships between the variables using structural equation modeling (SEM).

#### 3.3 Population and Sample Size

The target population for this study was teachers from four primary and secondary schools in four counties in Yunnan Province. Kline (2011) determines minimum sample size for structural model should be around 200. Nonetheless, this study subjects to 500 as applicable for the reliability of the data analysis.

#### 3.4 Sampling Technique

The sampling methods are judgmental, quota and convenience sampling. For judgmental sampling, the researchers selected four primary and secondary schools in Yunnan Province, China. Table 1. demonstrates the quota sampling for this study. Convenience sampling is to distribute online questionnaires from February to October 2022.

Table 1: Sample Units and Sample Size

Primary and Secondary Schools	Population Size	Proportional Sample Size
Guandu Secondary School Affiliated to Yunnan Normal University	346	150
Junfa City Secondary School attached to Yunnan Normal University	369	150
Kumenghu Primary School attached to Yunnan Normal University	332	150
Rongchuang Primary School attached to Yunnan Normal University	217	50
<b>Total</b>	<b>1264</b>	<b>500</b>

## 4. Results and Discussion

### 4.1 Demographic Information

Demographic information collected from 500 participants. Of the respondents, there were 276 females and 224 males, accounting for 55.2% and 44.8%, respectively. There were 247 (49.4%) teachers between the ages of 25 and 35, 139 (27.8%) between the ages of 36 and 46, and 114 (22.8%) between the ages of 47 and 57. There were 298 (59.6%) secondary school teachers and 202 (40.4%) primary school teachers. Table 2. presents demographic information for this study.

**Table 2:** Demographic Profile

Demographic and General Data (N=500)		Frequency	Percentage
Gender	female	276	55.2%
	male	224	44.8%
Age	25 to 35 years old	247	49.4%
	36 to 46 years old	139	27.8%

Demographic and General Data (N=500)		Frequency	Percentage
	47 to 57 years old	114	22.8%
Schools	Secondary School teachers	298	59.6%
	Primary School teachers	202	40.4%

### 4.2 Confirmatory Factor Analysis (CFA)

This paper used confirmatory factor analysis (CFA) to measure each variable in the conceptual framework of this study. The measurement results showed that all scale items for each variable were significant. In addition, the factor loading values for each scale item were acceptable, indicating that the conceptual framework of this study was a good fit. All factor loading values for this study were greater than 0.30, all of the p-values were less than 0.05, all of the construct reliabilities were greater than 0.70, and all of the means extracted variances were greater than 0.50 (Fornell & Larcker, 1981). These estimates were all significant. Table 3. shows all of these values.

**Table 3:** Confirmatory Factor Analysis Result, Composite Reliability (CR) and Average Variance Extracted (AVE)

Variables	Source of Questionnaire (Measurement Indicator)	No. of Item	Cronbach's Alpha	Factors Loading	CR	AVE
Climate (CL)	Valero et al. (2012)	3	0.952	0.921-0.950	0.952	0.868
Commitment (CO)	Muhammad (2019)	3	0.841	0.796-0.864	0.874	0.698
Emotion (EM)	Sevda and Sigrid (2016)	3	0.942	0.880-0.950	0.943	0.847
Knowledge (KN)	Abdul Shabbir et al. (2019)	3	0.881	0.744-0.917	0.884	0.718
Leadership (LE)	Amlan et al. (2020)	3	0.920	0.796-0.939	0.922	0.798
Loyalty (LO)	Korfmann and Muller (2020)	3	0.897	0.852-0.873	0.897	0.744
Performance (PE)	Muhammad (2019)	3	0.895	0.772-0.932	0.893	0.738

This study uses GFI, AGFI, NFI, CFI, TLI, and RMSEA as model fit indicators in the CFA test. Table 4 shows the convergent validity and discriminant validity for this study. These two values were validated to be acceptable. All the measurements validated the validity of the structural model estimated in this study.

**Table 4:** Goodness of Fit for Measurement Model

Fit Index	Acceptable Criteria	Statistical Values After Adjustment
CMIN/DF	< 5.00 (Al-Mamary et al., 2015; Awang et al., 2012)	374.890/168 or 2.231
GFI	≥ 0.85 (Sica & Ghisi, 2007)	0.935
AGFI	≥ 0.80 (Sica & Ghisi, 2007)	0.911
NFI	≥ 0.80 (Wu & Wang, 2006)	0.956
CFI	≥ 0.80 (Bentler, 1990)	0.975
TLI	≥ 0.90 (Hair et al., 2006)	0.969
RMSEA	< 0.08 (Hu & Bentler, 1999)	0.050

**Remark:** CMIN/DF = The ratio of the chi-square value to degree of freedom, GFI = Goodness-of-fit index, AGFI = Adjusted goodness-of-fit index, NFI = Normed fit index, CFI = Comparative fit index, TLI = Tucker-Lewis index and RMSEA = Root mean square error of approximation,

**Source:** Created by the author.

Table 5 displays the square roots of the level differences extracted, and these values indicate that the correlations of all the variables in this study are appropriate.

**Table 5:** Discriminant Validity

	CL	PE	LO	KN	EM	CO	LE
<b>CL</b>	<b>0.931</b>						
<b>PE</b>	0.409	<b>0.859</b>					
<b>LO</b>	0.139	0.096	<b>0.863</b>				
<b>KN</b>	-0.126	0.238	0.012	<b>0.848</b>			
<b>EM</b>	0.673	0.193	0.167	-0.056	<b>0.920</b>		
<b>CO</b>	0.226	0.409	0.182	0.086	0.207	<b>0.835</b>	
<b>LE</b>	0.015	0.243	0.103	0.085	-0.11	0.165	<b>0.893</b>

**Note:** The diagonally listed value is the AVE square roots of the variables  
**Source:** Created by the author.

### 4.3 Structural Equation Model (SEM)

The researchers used SPSS AMOS for the SEM calculations and adjusted the model. The fit index results for this study presented a good fit. CMIN/df = 3.849, GFI = 0.894, AGFI = 0.867, NFI = 0.917, CFI = 0.937, TLI = 0.928 and RMSEA = 0.076. Table 6 demonstrates goodness of fit for structural model.

**Table 6:** Goodness of Fit for Structural Model

Index	Acceptable	Statistical Values before Adjustment
CMIN/DF	< 5.00 (Al-Mamary et al., 2015; Awang et al., 2012)	704.395/183 or 3.849
GFI	≥ 0.85 (Sica & Ghisi, 2007)	0.894
AGFI	≥ 0.80 (Sica & Ghisi, 2007)	0.867
NFI	≥ 0.80 (Wu & Wang, 2006)	0.917
CFI	≥ 0.80 (Bentler, 1990)	0.937
TLI	≥ 0.90 (Hair et al., 2006)	0.928
RMSEA	< 0.08 (Hu & Bentler, 1999)	0.076

**Remark:** CMIN/DF = The ratio of the chi-square value to degree of freedom, GFI = Goodness-of-fit index, AGFI = Adjusted goodness-of-fit index, NFI = Normed fit index, CFI = Comparative fit index, TLI = Tucker-Lewis index, and RMSEA = Root mean square error of approximation

**Source:** Constructed by author

#### 4.4 Research Hypothesis Testing Result

Based on the regression weights and R2 variances for each variable, the researcher calculated the significance of the study model. Table 7 presents the results of all the hypotheses of this study.

**Table 7:** Hypothesis Results of the Structural Equation Modeling

Hypothesis	(β)	t-Value	Result
H1: LE → CO	0.198	4.161*	Supported
H2: EM → CO	0.225	4.732*	Supported
H3: CO → LO	0.188	3.752*	Supported
H4: CO → PE	0.318	7.232*	Supported
H5: KN → PE	0.262	6.121*	Supported
H6: CL → PE	0.377	8.995*	Supported

**Note:** \* p<0.05

**Source:** Created by the author

According to the results in Table 7, the researcher concludes that:

**H1** indicated that leadership was one of the key drivers of commitment with a criterion coefficient value of 0.198 in its structural path.

**H2** indicated that emotion was one of the key drivers of commitment, with a criterion coefficient value of 0.225 in its structural path.

**H3** indicated that commitment was one of the key drivers of loyalty, with a criterion coefficient value of 0.188 in its structural path.

**H4** indicated that commitment was one of the key drivers of performance, with a criterion coefficient value of 0.318 in its structural path.

**H5** indicated that knowledge was one of the key drivers of performance, with a common coefficient value of 0.262 in its structural path.

**H6** indicated that climate was one of the key drivers of performance, with a common coefficient value of 0.377 in its structural path.

## 5. Conclusion, Recommendation and Limitations

### 5.1 Conclusion and Discussion

The purpose of this study was to provide a comprehensive analysis of the impact of the National Training Programme (NTP) on teacher performance and loyalty in Yunnan, China. In 2010, China's Ministry of National Education and Ministry of Finance comprehensively promoted the implementation of the NTP. By 2020, the National Training Programme (NTP) had provided 10 years of systematic training for primary and secondary school teachers across the country. Therefore, it was necessary to conduct an in-depth study on the factors and mechanisms influencing the National Training Programme (NTP) on teacher performance and loyalty. This study advanced six hypotheses, which explored the relationships between the factors.

The target population of this study was teachers in Yunnan Province, China. This paper surveyed less economically developed counties in Yunnan Province, China. We administered questionnaires to 500 teachers participating in the National Training Programme (NTP) from the four primary and secondary schools. We analyzed the data from these questionnaire responses. The analysis of this data supported the conceptual framework of this paper. Previous relevant literature informed this conceptual framework. Based on previous related research, we used teacher commitment as a mediating factor influencing teacher performance and loyalty (Bartlett, 2001). The 500-point sample data of this study passed the SPSS and JAMOVI measurement analysis. The conceptual framework of this study passed the AMOS test and supported the item factor structure of this study. The CFA confirmed the suitability of this study's factor structure and validation model and that the relevant data were a good fit (West, 2002).

The data collected by the researcher from the 500 questionnaires passed the confirmatory factor analysis CFA measure. These results demonstrated that, passed the validity and reliability tests, the conceptual model of this study stood. The results of the convergent validity tests - composite reliability, Cronbach's alpha reliability, factor loading, mean-variance extraction analysis, and discriminant validity - proved that the concept of this study held (Steigenberger, 2015). This study's structural equation modeling (SEM) was used to analyze the impact of the National Training Programme (NTP) on teacher performance and loyalty in Yunnan, China. These results demonstrated that the research hypotheses presented in this paper are valid. They supported all six of the research hypotheses in this study.

The results showed that leadership and emotion directly

affected teacher commitment and indirectly affected teacher loyalty. The commitment directly impacted teacher performance and loyalty (Rhoades et al., 2001). Knowledge and climate also had a direct impact on teacher performance. This means that the commitment of teachers reached in the National Training Programme (NTP), the systematic knowledge imparted, and the communication climate influenced teacher performance and loyalty. This impact is direct and significant.

Secondly, in the National Training Programme (NTP), the three factors of commitment, knowledge, and climate directly impacted teacher performance and loyalty. This was the operational mechanism found in this study. Although this effect was modest, this quantitative study provides support and a basis for policy in the National Training Programme (NTP). It also provided new ideas for implementing the National Training Programme (NTP) that facilitated the optimal allocation of relevant resources.

## 5.2 Recommendation

Based on the findings of this paper, the recommendations are made by the following. Firstly, the suggestion is to improve the level of training leadership of training leads by developing targeted measures to optimize resourcing options. For example, it would be helpful to establish a mechanism by which leadership levels can assess the results linked to the support of follow-up resources.

Secondly, we recommend that the National Training Programme (NTP) spend resources on forming professional communities, using the achievement of the Teachers' Commitment as an opportunity (Dunham et al., 1994). Teachers in these relaxed professional communities would rely on the Internet to continue their professional exchange after their training.

Finally, the National Training Programme (NTP) should optimize the proportion of investment in these three factors to utilize its limited resources better. The resources invested in the National Training Programme (NTP) required introducing a feedback mechanism. On this basis, there was continuous feedback on the National Training Programme (NTP) in terms of optimizing training knowledge, creating a good climate for academic exchange, guiding and reaching teachers' commitment, etc. Subsequent research about the impact of the National Training Programme (NTP) on teacher performance and loyalty would start from a higher level.

## 5.3 Limitation and Further Study

The limitations of this study were that the variables had an individual level, and the data to measure these variables came from a centralized period (Glick, 1985). The teachers who provided these data were from specific schools. It

would be useful in future studies to include variables similar to those in this study, to use a longitudinal or experimental design, and to collect data consistently at different points in time, which would take the study further.

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