

# The Influence of University Dean's Teaching Leadership and School Organizational Climate on Physical Education Teachers' Teaching Efficacy in Selected Universities in China

Hengbo Zhang, Maria Luvimi I. Casihan

Graduate School, Adamson University, CO 1000, Philippines

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**Abstract:** This study uses the questionnaire method to analyze the influence of university deans' teaching leadership and school organizational climate on teachers' teaching efficacy. The conclusions are as follows: Teachers' teaching efficacy has different levels under different background factors; Principal's instruction can promote teachers' teaching efficacy; The learning and teaching atmosphere in school promote teachers' teaching efficacy. Orderly management is the premise of good school organization atmosphere. It is suggested that teachers should strengthen their confidence in education and teaching, and actively improve their teaching skills and professional qualities. It is suggested that school administrators should pay attention to cultivating teachers' team spirit and establishing a harmonious and friendly interpersonal atmosphere.

**Keywords:** Teaching Efficacy; Teacher; Atmosphere.

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## 1. Introduction

With the rapid development of China's overall strength, education has made great strides forward, and constantly pursuing higher and better education quality has become the goal of educational development of every family and country. University education is related to students' study and employment, the future direction of life development, and the future construction and development of the country and the nation, and is an important stage of education. Teachers are the key to realizing the goal of strengthening education, improving the quality of education, and promoting the modernization of education. <The Opinions on Comprehensively Deepening the Reform of the Construction of Teachers in the New Era> released in 2018 contain expectations for middle school teachers, comprehensively improving the teaching level of middle school teachers, establishing a new type of high school teachers with high quality and professionalism, and training educational-type teachers have become the direction of teacher education efforts in the future period.

## 2. Literature Review

### 2.1. Research on Principal's Teaching Leadership

The concept of principal's teaching leadership emerged in the "Effective School" movement, which began in the 1970s in the United States. Later, Edmonds R (1979) and many other researchers studied the effective school movement and found that the principal's teaching leadership has an important impact on the overall effectiveness of the school. People began to pay more and more attention to the role of the principal's teaching leadership in the process of school development. Bossert S, Dwyer D, Rowan B, et al. (1982) concluded through research that whether the principal has strong teaching leadership depends on whether the principal has greater rights over the school curriculum setting and

teaching guidance, and whether the principal is capable of controlling and coordinating the school curriculum. Duke, D.L. (1982) believed that successful teaching leadership means that principals strongly support teachers' teaching activities, ensure sufficient resources for teachers' teaching, and communicate with teachers in a timely manner to find and solve problems in the teaching process.

### 2.2. School Organizational Climate

Lewin (1939) believes that the organizational atmosphere is the cognitive map of the perceived state of the organization formed in the brain of the members of an organization. This perception determines the working state of the members of the organization and will change with the change of the organizational atmosphere.

Forehand and Gilmer (1964) believe that the research on the concept of organizational climate should include the following three parts: whether the organizational climate has an impact on the members of the organization, whether it represents the unique characteristics of an organization, and whether it can last for a long time, this definition is widely recognized. People began to study the various influences of organizational atmosphere on the internal members of the organization. At first, more studies were conducted on the influence of enterprise atmosphere on employees' work. Halpin (1966) was the first scholar to introduce organizational atmosphere into the school environment. He took the school atmosphere as the ontology and human personality as the metaphor, and believed that the school organizational atmosphere was important to the school. Like a person's personality. Freiberg (1998) believes in his research that the school organizational atmosphere exists around teachers and students all the time, just like air filling every corner of the campus.

## 3. Methodology

### 3.1. Research Design

The research design used was a descriptive-comparative-

correlational quantitative design was employed. This methodology was used to explore the influence of the deans' teaching leadership, and organizational climate that might affect the teaching efficacy of the physical education teachers.

To explore the influence between deans' teaching leadership, school organizational climate, and PE teachers' teaching efficacy this study of PE teachers in three selected universities. The study included surveys to explore the relationship between the three. This chapter details the study of sample selection, instrumentation, data collection, and data analysis plans.

### 3.2. Research Instrument

The sampling technique is total enumeration. A total of 233 physical education teachers were the respondents of the study. The questionnaire used in the research is adapted and consists of four parts. The first part is the teachers' profiles. The second is the deans' teaching leadership, school organization atmosphere, and PE teachers' teaching efficacy.

## 4. Results and Discussions

**Table 1.** Overall Assessment of the Dean's Teaching Leadership

Variables	Composite		
	Mean	SD	Descriptive/Interpretation
Philosophy and Purpose Leadership	3.15	0.77	Agree/ Manifested
Promote teacher growth	3.19	0.80	Agree/ Manifested
Instruction and management	3.22	0.73	Agree/ Manifested
Creation of a teaching environment	3.15	0.77	Agree/ Manifested
Composite	3.18	0.71	Agree/ Manifested

Legend:4.00-3.51=Strongly Agree; 3.50-2.51=Agree; 2.50-1.51=Disagree; 1.50-1.00=Strongly Disagree.

Table 1 presents the dean's teaching leadership assessment across four key areas: *Philosophy and Purpose Leadership*, *Promote Teacher Growth*, *Instruction and Management*, and *Creation of Teaching Environment*. The table includes the composite mean scores, standard deviations (SD), interpretations, and rankings for each variable.

In the first area, *Philosophy and Purpose Leadership*, the mean score is 3.15 with a standard deviation of 0.77, which indicates that respondents generally agree on the effectiveness of the dean's leadership in this domain. This area is ranked third among the four categories, suggesting that while it is viewed positively, there is room for improvement.

The second area, *Promote Teacher Growth*, has a mean score of 3.19 and an SD of 0.80. This score reflects a strong agreement among respondents regarding the dean's efforts to support teacher development. The rank of 2 highlights this aspect as a notable strength of the dean's leadership.

In the third area, *Instruction and Management*, the mean score is 3.22, with an SD of 0.73. This is the highest score among the four categories, indicating that respondents view the dean's leadership in this area as particularly effective. The lower standard deviation suggests a greater consensus among respondents regarding the dean's capabilities in instruction and management.

The fourth area, *Creation of Teaching Environment*, has a mean score of 3.15 and an SD of 0.77. Similar to *Philosophy*

*and Purpose Leadership*, this area also indicates general agreement among respondents. However, it ranks third, which implies there are opportunities for further enhancement in this domain.

The total composite mean score across all indicators is 3.18, with a composite standard deviation of 0.71, indicating a positive overall perception of the dean's teaching leadership. The lower standard deviation suggests that respondents' views are consistent, reflecting a shared agreement on the effectiveness of the dean's leadership across the assessed areas.

**Table 2.** Overall Assessment of the school organizational climate

Indicators	Mean	SD	Descriptive/Interpretation
Management climate	3.23	.75	Agree/ Manifested
Teaching climate	3.19	.77	Agree/ Manifested
Learning climate	3.15	.81	Agree/ Manifested
Interpersonal climate	3.20	.80	Agree/ Manifested

Legend:4.00-3.51=Strongly Agree; 3.50-2.51=Agree; 2.50-1.51=Disagree; 1.50-1.00=Strongly Disagree.

Table 2 presents the overall assessment of the school's organizational climate across four key areas: *Management Climate*, *Teaching Climate*, *Learning Climate*, and *Interpersonal Climate*. This table includes the mean scores and standard deviations (SD) for each area.

In the first area, *Management Climate*, the mean score is 3.23 with a standard deviation of 0.75. This score indicates a strong agreement among respondents regarding the effectiveness of the management practices within the school. The relatively low SD suggests a high level of consensus among respondents about their perceptions of management.

The second area, *Teaching Climate*, has a mean score of 3.19 and an SD of 0.77. This score reflects a positive perception of the teaching environment, with respondents agreeing that teachers are committed and engaged. The SD indicates some variability in responses, though it is still within a relatively narrow range, suggesting general agreement.

In the third area, *Learning Climate*, the mean score is 3.15, with an SD of 0.81. This score suggests that respondents perceive the learning environment positively, although it is slightly lower than the previous two areas. The SD indicates moderate variability, reflecting some differences in opinions regarding the opportunities for professional development and self-improvement.

The fourth area, *Interpersonal Climate*, has a mean score of 3.20 and an SD of 0.80. This score indicates that respondents generally agree on the positive nature of relationships among staff members. The SD reflects similar variability as in the teaching and learning climates, suggesting some differences in perceptions of interpersonal dynamics.

In summary, the total mean scores across the four indicators range from 3.15 to 3.23, reflecting a generally positive perception of the school's organizational climate. The variability in standard deviations indicates some differences in perceptions among respondents, but overall, the results highlight a supportive environment characterized by effective management, positive teaching practices, opportunities for learning, and strong interpersonal relationships.

**Table 3.** Overall Assessment on PE Teachers' Teaching Efficacy

Variables	Composite		
	Mean	SD	Descriptive/Interpretation
Teaching preparation	3.15	0.75	Agree/ Manifested
Teaching notions	3.20	0.73	Agree/ Manifested
Teaching methods and strategies	3.21	0.74	Agree/ Manifested
Teaching evaluation	3.19	0.76	Agree/ Manifested
Composite	3.19	0.70	Agree/ Manifested

Legend:4.00-3.51=Strongly Agree; 3.50-2.51=Agree; 2.50-1.51=Disagree; 1.50-1.00=Strongly Disagree.

Table 3 presents the overall assessment of Physical Education (PE) teachers' teaching efficacy across four key areas: *Teaching Preparation*, *Teaching Notions*, *Teaching Methods and Strategies*, and *Teaching Evaluation*. This table includes the mean scores, standard deviations (SD), and interpretations for each area.

In the first area, *Teaching Preparation*, the mean score is 3.15 with a standard deviation of 0.75. This score indicates that respondents generally agree on the importance of effective preparation for teaching. The relatively low SD suggests a strong consensus among respondents regarding their views on teaching preparation.

The second area, *Teaching Notions*, has a mean score of

3.20 and an SD of 0.73. This score reflects a positive perception of the fundamental ideas that underpin PE teaching. The low SD indicates that respondents have a consistent view on the significance of these teaching notions.

In the third area, *Teaching Methods and Strategies*, the mean score is 3.21 with an SD of 0.74. This score indicates strong agreement on the importance of employing varied and effective teaching strategies. The SD reflects a similar level of variability, suggesting that respondents have a consistent understanding of the need for diverse instructional methods.

The fourth area, *Teaching Evaluation*, has a mean score of 3.19 and an SD of 0.76. This score indicates that respondents agree on the importance of evaluating teaching effectiveness and providing feedback. The SD shows moderate variability, suggesting some differences in perceptions regarding evaluation practices.

In summary, the total mean score for all indicators is 3.19, with a standard deviation of 0.70. This overall score reflects a generally positive perception of PE teachers' teaching efficacy across the four assessed areas. The variability in standard deviations indicates some differences in perceptions among respondents, but the results highlight a commitment to effective teaching preparation, a solid understanding of teaching notions, the use of diverse methods, and the importance of evaluation in the PE context.

**Table 4.** Relationship between the Dean's teaching leadership and the PE Teachers' Teaching Efficacy

Dean's teaching leadership	Statistical Treatment	PE Teachers' Teaching Efficacy			
		Teaching preparation	Teaching notions/ideas	Teaching methods and strategies	Teaching evaluation
Philosophy and purpose leadership	Pearson r	.741**	.738**	.805**	.744**
	sig	.000	.000	.000	.000
	Decision Ho	Reject	Reject	Reject	Reject
	Interpretation	Significant	Significant	Significant	Significant
Promote teacher growth	Pearson r	.749**	.720**	.767**	.722**
	sig	.000	.000	.000	.000
	Decision Ho	Reject	Reject	Reject	Reject
	Interpretation	Significant	Significant	Significant	Significant
Instruction and management	Pearson r	.748**	.692**	.786**	.713**
	sig	.000	.000	.000	.000
	Decision Ho	Reject	Reject	Reject	Reject
	Interpretation	Significant	Significant	Significant	Significant
Creation of a teaching environment	Pearson r	.712**	.730**	.823**	.764**
	sig	.000	.000	.000	.000
	Decision Ho	Reject	Reject	Reject	Reject
	Interpretation	Significant	Significant	Significant	Significant

\*The mean difference is significant at the 0.05 level.

Table 4 presents the relationship between the various aspects of the dean's teaching leadership and the PE teachers' teaching efficacy using Pearson's r correlation analysis. Four dimensions of the dean's leadership—Philosophy and Purpose Leadership, Promote Teacher Growth, Instruction and Management, and Creation of Teaching Environment—are examined about the four key domains of teaching efficacy.

For Philosophy and Purpose Leadership, the Pearson r values for Philosophy and Purpose Leadership and the four domains of teaching efficacy are as follows: Teaching Preparation:  $r = 0.741$ ,  $p = 0.000$ . Teaching Notions/Ideas:  $r = 0.738$ ,  $p = 0.000$ . Teaching Methods and Strategies:  $r = 0.805$ ,  $p = 0.000$ . Teaching Evaluation:  $r = 0.744$ ,  $p = 0.000$ .

The results indicate a strong positive and significant correlation between the dean's philosophy and purpose leadership and all four domains of teaching efficacy. Since all p-values are less than 0.05, the null hypothesis (H0) is

rejected, confirming that this leadership dimension significantly influences teaching efficacy. The highest correlation is found in Teaching Methods and Strategies ( $r = 0.805$ ), suggesting that the dean's philosophy and purpose leadership play a crucial role in shaping how PE teachers employ different methods and strategies in the classroom.

For promote Teacher Growth, the correlation coefficients for Promote Teacher Growth are as follows: Teaching Preparation:  $r = 0.749$ ,  $p = 0.000$ . Teaching Notions/Ideas:  $r = 0.720$ ,  $p = 0.000$ . Teaching Methods and Strategies:  $r = 0.767$ ,  $p = 0.000$ . Teaching Evaluation:  $r = 0.722$ ,  $p = 0.000$ .

Similar to the previous dimension, Promote Teacher Growth exhibits a strong and significant positive relationship with all aspects of teaching efficacy. The highest correlation is with Teaching Methods and Strategies ( $r = 0.767$ ), indicating that when deans actively promote teacher growth, PE teachers are more likely to adopt diverse and effective

teaching methods. Again, all p-values are less than 0.05, leading to the rejection of the null hypothesis (H0).

In the domain of instruction and management, the Pearson r values for Instruction and Management are as follows: Teaching Preparation:  $r = 0.748$ ,  $p = 0.000$ . Teaching Notions/Ideas:  $r = 0.692$ ,  $p = 0.000$ . Teaching Methods and Strategies:  $r = 0.786$ ,  $p = 0.000$ . Teaching Evaluation:  $r = 0.713$ ,  $p = 0.000$ .

The results show a strong positive and significant correlation between Instruction and Management and the four domains of teaching efficacy. The strongest correlation is with Teaching Methods and Strategies ( $r = 0.786$ ), suggesting that effective instructional leadership and management practices foster teachers' ability to implement diverse and effective teaching methods. The null hypothesis (H0) is rejected for all domains, indicating that this leadership dimension significantly impacts teaching efficacy.

For creation of the Teaching Environment, the correlation coefficients for Creation of the Teaching Environment are as follows: Teaching Preparation:  $r = 0.712$ ,  $p = 0.000$ . Teaching Notions/Ideas:  $r = 0.730$ ,  $p = 0.000$ . Teaching Methods and Strategies:  $r = 0.823$ ,  $p = 0.000$ . Teaching Evaluation:  $r = 0.764$ ,  $p = 0.000$ .

Among the four leadership dimensions, the Creation of a Teaching Environment shows the strongest correlation with

Teaching Methods and Strategies ( $r = 0.823$ ), indicating that deans who create supportive and conducive teaching environments significantly enhance teachers' efficacy in using effective teaching strategies. All correlations are statistically significant ( $p < 0.05$ ), leading to the rejection of the null hypothesis (H0) across all domains.

The results from Table 23 demonstrate a strong and significant positive relationship between all four dimensions of the dean's teaching leadership and the PE teachers' teaching efficacy in all four domains. The Pearson r values indicate that each leadership dimension is positively correlated with teaching efficacy, with particularly strong correlations in the domain of Teaching Methods and Strategies. This suggests that the dean's teaching leadership plays a critical role in shaping the teaching efficacy of PE teachers, especially in terms of their ability to employ effective teaching methods and strategies. As a result, all null hypotheses (H0) are rejected, confirming the significant impact of the dean's leadership on teaching efficacy. Zheng Xin et al. (2018) studied deans and teachers of primary and secondary schools. Through empirical research, they confirmed that teachers' sense of teaching effectiveness is indeed affected by deans' teaching leadership, especially when teachers have full trust in deans, the influence will be stronger.

**Table 5.** Relationship between the school organizational climate and the PE Teachers' Teaching Efficacy

School organizational climate	Statistical Treatment	PE Teachers' Teaching Efficacy			
		Teaching preparation	Teaching notions/ideas	Teaching methods and strategies	Teaching evaluation
Management climate	Pearson r	.749**	.767**	.786**	.731**
	sig	.000	.000	.000	.000
	Decision Ho	Reject	Reject	Reject	Reject
	Interpretation	Significant	Significant	Significant	Significant
Teaching climate	Pearson r	.740**	.777**	.800**	.721**
	sig	.000	.000	.000	.000
	Decision Ho	Reject	Reject	Reject	Reject
	Interpretation	Significant	Significant	Significant	Significant
Learning climate	Pearson r	.724**	.751**	.775**	.693**
	sig	.000	.000	.000	.000
	Decision Ho	Reject	Reject	Reject	Reject
	Interpretation	Significant	Significant	Significant	Significant
Interpersonal climate	Pearson r	.707**	.734**	.754**	.706**
	sig	.000	.000	.000	.000
	Decision Ho	Reject	Reject	Reject	Reject
	Interpretation	Significant	Significant	Significant	Significant

\*The mean difference is significant at the 0.05 level.

For management Climate, the Pearson correlation coefficients are as follows: teaching preparation ( $r = .749$ ), teaching notions/ideas ( $r = .767$ ), teaching methods and strategies ( $r = .786$ ), and teaching evaluation ( $r = .731$ ). All correlations are significant with p-values of .000, leading to the rejection of the null hypothesis (H0). This indicates a strong positive relationship between management climate and teaching efficacy.

For teaching climate, the coefficients are: teaching preparation ( $r = .740$ ), teaching notions/ideas ( $r = .777$ ), teaching methods and strategies ( $r = .800$ ), and teaching evaluation ( $r = .721$ ). These correlations are also significant ( $p = .000$ ), resulting in the rejection of H0. This suggests that a positive teaching climate contributes to enhanced teaching efficacy.

The learning climate shows the following correlations: teaching preparation ( $r = .724$ ), teaching notions/ideas ( $r = .751$ ), teaching methods and strategies ( $r = .775$ ), and teaching evaluation ( $r = .693$ ). Again, all are significant ( $p = .000$ ), leading to the rejection of H0. This indicates that a supportive learning environment is essential for effective teaching practices.

The correlations for interpersonal climate are teaching preparation ( $r = .707$ ), teaching notions/ideas ( $r = .734$ ), teaching methods and strategies ( $r = .754$ ), and teaching evaluation ( $r = .706$ ). With p-values of .000, these results lead to the rejection of H0, demonstrating the importance of positive interpersonal relationships in the school setting.

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## 5. Conclusion

Teaching guidance and management is an important part of the dean's teaching leadership. By visiting the classroom and attending lectures, the dean can timely find out the problems in teachers' teaching and evaluate the teaching quality and

teaching effect. All these enable teachers to have a clear evaluation and understanding of their own teaching and improve the sense of teaching efficacy.

A positive school climate improves teachers' teaching efficacy by providing a supportive environment, clear goals, and collaboration. A strong learning and teaching atmosphere encourages teachers to enhance their skills and stay committed to their roles, while a good interpersonal climate promotes trust and teamwork between teachers and students. This leads to higher satisfaction and a greater sense of teaching effectiveness.

Good leadership can influence good learning environment.

## 6. Recommendations:

1) Leadership Development Workshops that will enhance the leadership styles and skill of the deans.

2) Professional Development Training for teachers that will help them become effective and efficient teacher so that students will become more engaged in their learning. Development of knowledge, skills, and attitude of teachers as well as the students

3) Continuous learning and innovation especially the use of technology by the teachers to make the lessons more enjoyable to students with the help of the dean through the

enhanced teaching efficacy development program.

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