



## IMPACT OF DEANS' LEADERSHIP ON THE DEVELOPMENT OF TEACHING COMPETENCIES IN UNIVERSITIES IN INNER MONGOLIA, CHINA

### IMPACTO DEL LIDERAZGO DE LOS DECANOS EN EL DESARROLLO DE COMPETENCIAS DOCENTES EN LAS UNIVERSIDADES DE MONGOLIA INTERIOR, CHINA

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#### Suggested citation (APA, seventh ed.)

Puyu., Zh. & Binti Ismail, A. (2025). Impact of deans' leadership on the development of teaching competencies in universities in Inner Mongolia, China. *Revista Conrado*, 21(105), e4702.

#### ABSTRACT

This study examines the influence of deans' distributed leadership (DL) on lecturers' teaching competencies in Inner Mongolia universities (IMU), China. Data were collected from 194 lecturers through an online survey using validated instruments. Results demonstrate that deans' DL significantly enhances lecturers' teaching competencies, particularly through effective leadership practices. However, the overall level of deans' DL is below average, with mission, vision, and goals requiring significant improvement. Lecturers' teaching competencies are slightly above average, indicating considerable potential for enhancement. The study concludes that strengthening deans' DL, especially in relation to specific leadership practices, is essential for improving lecturers' teaching competencies and educational quality in Inner Mongolian universities. Future research should explore the implementation of DL in diverse educational contexts and identify strategies for enhancing its effectiveness further.

#### Keywords:

Distributed Leadership, Teaching Competency, Inner Mongolia Universities.

#### RESUMEN

Este estudio examina la influencia del liderazgo distribuido (DL) de los decanos en las competencias docentes de los profesores en las universidades de Mongolia Interior (IMU), China. Se recopilaban datos de 194 profesores a través de una encuesta en línea utilizando instrumentos validados. Los resultados demuestran que el DL de los decanos mejora significativamente las competencias docentes de los profesores, en particular a través de prácticas de liderazgo eficaces. Sin embargo, el nivel general del DL de los decanos está por debajo del promedio, y la misión, la visión y los objetivos requieren una mejora significativa. Las competencias docentes de los profesores están ligeramente por encima del promedio, lo que indica un potencial considerable de mejora. El estudio concluye que fortalecer el DL de los decanos, especialmente en relación con prácticas de liderazgo específicas, es esencial para mejorar las competencias docentes de los profesores y la calidad educativa en las universidades de Mongolia Interior. Las investigaciones futuras deberían explorar la implementación del DL en diversos contextos educativos e identificar estrategias para mejorar aún más su eficacia.

#### Palabras clave:

Liderazgo distribuido, competencia docente, Universidades de Mongolia Interior.



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Vol 21 | No.105 | July-August | 2025  
Continuous publication  
e4702



## INTRODUCTION

All over the world, tertiary education is experiencing tremendous change, with quality enhancement being a major priority (United Nations Educational, Scientific and Cultural Organization, 2022). For China, quantitative development gives way to qualitative improvement in tertiary education through country policies there is an underscored importance placed on lecturers' contribution towards enhancing educational quality. In comparison, however, Inner Mongolia is ranked 26th among 31 provinces and autonomous regions based on the 2023-2024 University Education Regional Competitiveness Ranking which points towards a need for improvement in teaching capabilities.

Distributed leadership (DL) has been recognized as a useful conceptual framework for developing excellence in instruction and learning by facilitating shared accountability, teamwork, and collective capacity development, which enhances teaching quality and student performance (Phillips et al., 2023). However, effects of leadership styles in education context widely has been considered in various studies (Voitenko et al., 2024; Robson & Mushi, 2025)

Although there is potential for DL, studies on DL within the Chinese university context are rare (Ministry of Education of the People's Republic of China, 2017). There are few theoretical and empirical studies exploring distance learning in the Chinese context; most are located in Western contexts. This lack calls for more studies exploring the application of distance learning at the institutional level in China, especially among deans, who play a key role in communication between university leaders and academic units. This research proposes to fill the gap by exploring whether DL would improve lecturers' pedagogy capabilities and facilitate education reforms within Chinese universities.

The concept of DL is often attributed to Gibb (1954), who emphasized that leadership should be perceived as a shared responsibility among group members rather than an individual's exclusive domain. Spillane et al. (2001), defined DL as "the collective properties of the group of leaders working together to enact a particular task, leading to the evolution of a leadership practice that is potentially more than the sum of each individual's practice" (p. 25). Leadership practice is characterized as a product of interactions between leaders, followers, and their situational contexts. Spillane (2005), stated, "***DL is first and foremost about leadership practice rather than leaders or their roles, functions, routines, and structures***" (p. 144). This perspective views leadership as an ongoing practice influenced by contextual factors rather than a static set

of roles. Spillane (2005), criticized the "leader-plus" view, suggesting that the true depth of DL lies in the complex engagement among leaders, followers, and their environments. This approach emphasizes shared responsibility, collaborative decision-making, and dynamic interactions, challenging traditional hierarchical models by promoting a more inclusive and contextually situated understanding of leadership.

DL is dynamic, relational, inclusive, collaborative, and contextually situated (Bolden, 2007). Emergent qualities of interaction, identification of expertise, and open boundaries are among the important features. This is a process that considers input from stakeholders such as parents, students, and the community (Bolden, 2007). Spillane (2004), classifies DL into three categories: collaborative, coordinated, and collective. Collaborative distribution is all about reciprocal interdependencies within leaders and followers, sequential tasks performed by different leaders with coordinated distribution, and interdependent actions of leaders working separately.

DL has been proven to influence a number of areas within educational organizations, including organizational and individual change (Harris et al., 2016), teacher optimism and self-efficacy and learning and teaching performance (Kumari, 2021). DL has a positive impact on teacher autonomy and innovativeness, which, in turn, help drive instruction quality (Hsieh et al., 2024). DL is also capable of enhancing university lecturers' self-efficacy and motivation, which results in better teaching performance and greater student satisfaction, playing a significant role in students' achievements within higher education. Nevertheless, it is challenging to implement, especially in traditional hierarchical contexts. In China, adopting more distributed forms of leadership within higher education arises from an urge for teaching effectiveness and favorable student outcomes. However, an absence of DL has been a limitation for reform processes, calling for further studies within this topic.

To comprehend DL's mechanisms by which it affects lecturers' teaching capabilities, the present work draws from the Leader-Member Exchange theory. LMX theory, based on social exchange theory and role theory, argues that follower performance and follower behavior are considerably affected by high-quality relationships with leaders. High-quality LMX is associated with greater job performance, psychological empowerment, and innovative performance among university staff (Ardabili, 2020; Zhu & Tsai, 2024). Furthermore, LMX theory has been used for enhancing student performance and adjustment based on high-quality relations between student peer leaders and first-year students, allowing for smoother integration into academic contexts.

Teaching Competency (TC)

TC in higher education is a multifaceted construct that involves the knowledge, skills, and attitudes educators use to facilitate effective teaching and learning. Pedagogically, it involves planning, executing instruction, employing teaching techniques, assessing students, and fulfilling professional duties. Cheng et al. (2024), noted that these competencies develop through teaching practice, blending instructional behaviors and technical abilities. Sociologically, teaching competencies focus on teacher-student interactions, enhancing students' intrinsic motivation and self-directed learning. Patel (2017), described TC as encompassing all teacher competencies used in teaching situations, emphasizing its adaptability across traditional and digital settings. The emergence of digital TC integrates pedagogy with technology, addressing educators' need to facilitate both in-person and online learning (Cheng, 2024).

In higher education, teaching competencies include five key areas: planning, instructional skills, assessment, professional knowledge, and responsibilities. Other categorizations include academic, planning, management, communication, assessment, and interpersonal skills; professional knowledge, curriculum design, communication, and teaching management; and cognitive, design, operational, and monitoring abilities. Molenaar et al. (2009), provided a structured framework consisting of knowledge, skills, attitudes; leadership at different organizational levels; and teaching domains such as development, organization, implementation, guidance, evaluation, and reflection. These components highlight the complexity and multifaceted nature of teaching competencies, underscoring the need for a comprehensive approach to their development and assessment.

Recent research has examined the association between DL and TC, including the favorable influence of DL behaviors on teachers' self-efficacy, motivation, and teaching quality (Hsieh et al., 2024). These studies provide evidence that DL is able to increase teachers' autonomy and innovativeness, which further lead to better teaching performance and greater student satisfaction. In university education, DL has been indicated to create a supportive working culture that facilitates teacher collaboration and professional practice (Phillips et al., 2023).

By combining LMX theory and DL, this research sets out to achieve a deep-level understanding of the impact that deans' leadership behaviors have on lecturers' teaching capabilities within universities of Inner Mongolia. High-quality LMX relationships based on mutual trust, respect, and support are able to increase lecturers' motivation and self-efficacy, which, in turn, translate into effective teaching capabilities.

MATERIALS AND METHODS

An online questionnaire was employed to investigate how lecturers' teaching competencies are influenced by the DL of deans at universities in Inner Mongolia. The questionnaire gathered data about participants' teaching tenure and their years of service under the current dean.

Overall, 194 valid responses were obtained, yielding an effective response rate of 94.17%. The respondents included an approximately equal proportion of males (49.48%) and females (50.52%), primarily between the ages of 31 and 50. The majority (62.89%) had master's degrees, while doctoral-degree holders comprised 24.23% of the sample. Regarding professional ranks, lecturers accounted for 40.21%, and associate professors comprised 39.18%. Most participants reported teaching experience ranging from 11 to 20 years and were affiliated with schools whose deans were predominantly female.

Detailed demographic data are summarized in Table 1, reflecting the diversity and representativeness of the sample, thereby providing a strong basis for the study.

Table 1: Basic Characteristics of the Survey Subjects (n=194).

Item	Option	n	Percentage (%)
Teaching experience of three years or more	Yes	194	100.00
Years served under the current dean	One year or more	194	100.00
Gender	Male	96	49.48
	Female	98	50.52



Item	Option	n	Percentage (%)
Age	Under 30 years	2	1.03
	31-40 years	62	31.96
	41-50 years	114	58.76
	Above 51 years	16	8.25
Highest degree	Bachelor' s	25	12.89
	Master' s	122	62.89
	Doctoral	47	24.23
	Assistant	33	17.01
Professional title	Lecturer	78	40.21
	Associate Professor	76	39.18
	Professor	7	3.61
	3-10 years	20	10.31
Teaching experience	11-20 years	123	63.40
	21-30 years	43	22.16
	31 years or more	8	4.12
	Male	28	14.43
Gender of the dean	Female	166	85.57
Total		194	100.0

Source: Prepared by authors

Data collection was carried out using a three-part questionnaire: a) Demographic characteristics of the sample; b) Deans' DL Scale, adapted from Ng, K.K. (2022), containing 16 items distributed across four dimensions: mission, vision, and goals; organizational culture; leadership practice; and shared responsibility; and c) Lecturers' TC Scale adapted from Moreno-Murcia et al. (2015), comprising 28 items grouped into three categories: planning, development, and outcomes.

A five-point Likert scale (1: "very disagree" to 5: "very agree") was employed. The reliability of the DL Scale was verified, with Cronbach's  $\alpha$  coefficients ranging between 0.843 and 0.887 for all four dimensions, exceeding the threshold of 0.8. Corrected item-total correlation (CITC) values were all above 0.4, confirming robust internal consistency (Table 2).

Table 2. Reliability Analysis of DL

Variable	Item	CITC	$\alpha$ if Item Deleted	Cronbach $\alpha$
Mission, Vision and Goals	MV1	0.716	0.856	0.880
	MV2	0.738	0.848	
	MV3	0.749	0.842	
	MV4	0.763	0.837	
Organizational Culture	OC1	0.657	0.811	0.843
	OC2	0.695	0.794	
	OC3	0.720	0.783	
	OC4	0.643	0.817	
Leadership Practice	LP1	0.728	0.836	0.872
	LP2	0.756	0.824	
	LP3	0.744	0.829	
	LP4	0.676	0.855	
Shared Responsibility	SR1	0.750	0.856	0.887
	SR2	0.723	0.866	
	SR3	0.737	0.860	
	SR4	0.803	0.835	

Source: Prepared by authors

Confirmatory factor analysis (CFA) was conducted on a measurement model composed of four latent variables—mission, vision, and goals; organizational culture; leadership practices; and shared responsibility—which were measured through 16 items. The model showed a satisfactory fit to the data. All standardized factor loadings exceeded 0.6 and were statistically significant ( $p < 0.001$ ), demonstrating strong measurement validity. Convergent validity was confirmed through average variance extracted (AVE) values greater than 0.5 and composite reliability (CR) coefficients surpassing 0.7. Discriminant validity was supported, as the square roots of AVE (0.805, 0.759, 0.795, and 0.815) surpassed the highest inter-factor correlations. Complete results are provided in Tables 3, 4, 5 and 6.

Table 3. Confirmatory Factor Analysis of DL.

Category	Index	Fit Standard	Result	Acceptable
Absolute Fit Parameters	GFI	>0.8	0.930	Accept
	AGFI	>0.8	0.903	Accept
	RMSEA	<0.08	0.028	Accept
Incremental Fit Parameters	NFI	>0.8	0.933	Accept
	IFI	>0.8	0.991	Accept
	CFI	>0.8	0.991	Accept
	RFI	>0.8	0.919	Accept
Parsimonious Fit Parameters	CMIN/df	<3	1.148	Accept
	PGFI	>0.5	0.670	Accept

Source: Prepared by authors

Table 4. Standardized and Unstandardized Factor Loadings.

Latent Variable	Observed Variable	Unstandardized Loading	SE	CR	p	Standardized Loading
Mission, Vision, and Goals	MV1	1.000	-	-	-	0.767
	MV2	1.204	0.108	11.153	0.000	0.796
	MV3	1.178	0.102	11.581	0.000	0.826
	MV4	1.218	0.104	11.664	0.000	0.832
Organizational Culture	OC1	1.000	-	-	-	0.737
	OC2	1.106	0.112	9.874	0.000	0.772
	OC3	1.145	0.111	10.271	0.000	0.813
	OC4	1.029	0.113	9.137	0.000	0.710
Leadership Practices	LP1	1.000	-	-	-	0.790
	LP2	1.099	0.092	11.922	0.000	0.826
	LP3	1.085	0.091	11.925	0.000	0.827
	LP4	0.947	0.091	10.421	0.000	0.732
Shared Responsibility	SR1	1.000	-	-	-	0.812
	SR2	0.949	0.080	11.827	0.000	0.778
	SR3	0.976	0.082	11.963	0.000	0.785
	SR4	1.188	0.087	13.669	0.000	0.880

Note. Dashes (–) indicate reference items; CR = Critical Ratio; SE = Standard Error.

Source: Prepared by authors

Table 5. Convergent Validity: AVE and CR

Latent Variable	AVE	CR
Mission, Vision, and Goals	0.649	0.881
Organizational Culture	0.576	0.844
Leadership Practices	0.632	0.873

Latent Variable	AVE	CR
Shared Responsibility	0.664	0.888

Source: Prepared by authors

Table 6. Discriminant Validity: Pearson Correlations and AVE.

	1	2	3	4
1.Mission, Vision, and Goals	0.805			
2.Organizational Culture	0.241	0.759		
3.Leadership Practices	0.265	0.259	0.795	
4.Shared Responsibility	0.237	0.322	0.334	0.815
Note. Bold diagonal values are square roots of AVE; off-diagonal values are Pearson correlation coefficients.				

Source: Prepared by authors

The TC Scale encompassed three dimensions: planning, development, and outcomes, totaling 28 items. Cronbach's coefficients of these dimensions were 0.880 (planning), 0.957 (development), and 0.876 (outcomes), all above the acceptable level of 0.8. Corrected item-total correlations (CITC) values for each item exceeded 0.4, indicating high reliability (Table 7).

CFA confirmed good fit of the measurement model for TC across the three dimensions. All standardized factor loadings were statistically significant ( $p < 0.001$ ) with absolute values  $>0.6$ , supporting robust measurement relationships. Convergent validity was established, with average variance extracted (AVE)  $>0.5$  and composite reliability (CR)  $>0.7$ .

Table 7. Reliability Analysis of TC.

Variable	Item	CITC	$\alpha$ if Item Deleted	Cronbach $\alpha$
Planning	PL1	0.765	0.837	0.880
	PL2	0.715	0.856	
	PL3	0.742	0.846	
	PL4	0.742	0.846	
Development	DE1	0.688	0.955	0.957
	DE2	0.732	0.954	
	DE3	0.729	0.954	
	DE4	0.742	0.954	
	DE5	0.702	0.955	
	DE6	0.728	0.954	
	DE7	0.692	0.955	
	DE8	0.723	0.955	
	DE9	0.690	0.955	
	DE10	0.735	0.954	
	DE11	0.690	0.955	
	DE12	0.674	0.955	
	DE13	0.743	0.954	
	DE14	0.722	0.955	
	DE15	0.698	0.955	
	DE16	0.740	0.954	
	DE17	0.775	0.954	
	DE18	0.711	0.955	
	DE19	0.716	0.955	

Results	RE1	0.713	0.848	0.876
	RE2	0.730	0.845	
	RE3	0.701	0.851	
	RE4	0.680	0.856	
	RE5	0.708	0.850	

Source: Prepared by authors

Discriminant validity was also confirmed, as square roots of AVE (0.805, 0.735, and 0.766) exceeded their respective inter-factor correlations (Tables 8, 9, 10 and 11).

Table 8. Confirmatory Factor Analysis of TC.

Category		Index	Fit Standard		Result	Acceptable
Absolute Fit Parameters		GFI	>0.8		0.876	Accept
	AGFI	>0.8	0.854		Accept	
	RMSEA	<0.08	0.027		Accept	
Incremental Fit Parameters		NFI	>0.8		0.887	Accept
	IFI	>0.8	0.985		Accept	
	CFI	>0.8	0.984		Accept	
	RFI	>0.8	0.877		Accept	
Parsimonious Fit Parameters		CMIN/df	<3		1.141	Accept
	PGFI	>0.5	0.748		Accept	

Source: Prepared by authors

Table 9. Standardized and Unstandardized Factor Loadings.

Latent Variable	Item	Unstandardized Loading	SE	CR	p	Standardized Loading
Planning	PL1	1.000	-	-	-	0.837
	PL2	0.898	0.076	11.775	0.000	0.770
	PL3	1.010	0.081	12.413	0.000	0.803
	PL4	1.016	0.081	12.564	0.000	0.810



Category		Index	Fit Standard		Result	Acceptable	
Absolute Fit Parameters		GFI	>0.8		0.876	Accept	
	AGFI	>0.8	0.854		Accept		
	RMSEA	<0.08	0.027		Accept		
Development	DE1	1.000	-	-	-	0.704	
	DE10	1.083	0.106	10.180	0.000	0.752	
	DE11	1.038	0.108	9.580	0.000	0.707	
	DE12	0.959	0.103	9.330	0.000	0.688	
	DE13	1.108	0.108	10.277	0.000	0.759	
	DE14	1.066	0.107	9.984	0.000	0.737	
	DE15	1.019	0.105	9.700	0.000	0.716	
	DE16	1.139	0.111	10.256	0.000	0.758	
	DE17	1.212	0.113	10.736	0.000	0.794	
	DE18	1.110	0.113	9.844	0.000	0.727	
	DE19	1.073	0.108	9.924	0.000	0.733	
	DE2	1.041	0.103	10.138	0.000	0.749	
	DE3	1.085	0.107	10.111	0.000	0.747	
	DE4	1.143	0.111	10.292	0.000	0.760	
	DE5	1.053	0.108	9.733	0.000	0.718	
	DE6	1.066	0.106	10.100	0.000	0.746	
	DE7	1.030	0.107	9.582	0.000	0.707	
	DE8	1.073	0.107	10.023	0.000	0.740	
	DE9	1.028	0.107	9.567	0.000	0.706	
Outcomes	RE1	1.000	-	-	-	0.773	
	RE2	1.098	0.098	11.177	0.000	0.797	
	RE3	0.956	0.091	10.556	0.000	0.756	
	RE4	0.953	0.093	10.241	0.000	0.736	
	RE5	0.999	0.093	10.725	0.000	0.767	
Note. Dashes (-) indicate reference items; CR = Critical Ratio; SE = Standard Error.							
Source: Prepared by authors							
Table 10. Convergent Validity: AVE and CR							
Latent Variable				AVE		CR	
Planning				0.649		0.881	



Category		Index	Fit Standard		Result	Acceptable	
Absolute Fit Parameters		GFI	>0.8		0.876	Accept	
	AGFI	>0.8		0.854	Accept		
	RMSEA	<0.08		0.027	Accept		
Development				0.539	0.957		
Outcomes				0.587	0.877		

Table 11. Discriminant Validity: Pearson Correlations and AVE.

	1	2	3
1.Planning	0.805		
2.Development	0.167	0.735	
3.Outcomes	0.248	0.147	0.766
Note. Bold diagonal values are square roots of AVE; off-diagonal values are Pearson correlation coefficients. Source: Prepared by authors			

Data Collection and Analysis

Data collection occurred via the “Wenjuanxing” survey platform. SPSS 26 and Amos 26 software packages were utilized for conducting reliability and validity analyses, descriptive statistics, difference analysis, and regression analyses.

RESULTS AND DISCUSSION

Descriptive Statistical Analysis of Dean’ s DL and Lecturers’ TC

(1) The Dean’s DL: Below Average, Particularly in Mission, Vision, and Goals

Descriptive statistics for the variables and overall mean scores of DL are provided in Table 12.

Table 12. Descriptive Statistics for DL and Its Dimensions.

Variable	Sample Size	Min	Max	Mean	Std. Dev	Median
Mission, Vision and Goals	194	1.250	4.750	2.884	0.950	2.750
Organizational Culture	194	1.250	4.750	2.970	0.822	3.000
Leadership Practice	194	1.000	4.750	2.893	0.904	2.875
Shared Responsibility	194	1.000	4.750	2.927	0.939	2.875
Leadership	194	1.500	4.438	2.918	0.611	2.906

Source: Prepared by authors

The aggregate mean score for DL was 2.918, below the midpoint (3) on the five-point scale. Among the dimensions, organizational culture scored highest (2.970), suggesting relatively better performance yet still requiring improvement. Mission, vision, and goals scored the lowest (2.884), highlighting a need for clearer strategic guidance and enhanced communication between deans and lecturers. Leadership practice and shared responsibility had intermediate scores (2.893 and 2.927 respectively), indicating areas where further development is possible.

(2) Lecturers’ TC: Moderately Above Average with Room for Improvement

Descriptive statistics for TC dimensions and the overall scores are presented in Table 13.



Table 13. Descriptive Statistics for TC and Its Dimensions.

Variable	Sample Size	Min	Max	Mean	Std. Deviation	Median
Planning	194	1.250	4.500	3.134	0.920	3.250
Development	194	1.211	4.474	3.177	0.779	3.211
Results	194	1.250	4.500	3.222	0.858	3.500
TC	194	1.464	4.321	3.178	0.613	3.250

Source: Prepared by authors

Descriptive statistics for TC dimensions and the overall scores are presented in Table 13. The mean score was 3.178, above the theoretical midpoint of 3. The results dimension received the highest average score (3.222), followed by development (3.177), while planning obtained the lowest average (3.134). The relatively lower scores in planning suggest that lecturers might need additional support in curriculum development and instructional strategy formulation.

Analysis of Differences in Deans’ DL and Lecturers’ TC under Different Control Variables

One-way ANOVA tests examined the differences in DL and TC based on demographic characteristics.

(1) Impact of Educational Level on DL and TC

Table 14 shows significant differences related to educational qualifications. DL perceptions varied significantly by educational level ( $F=17.983$ ,  $p=0.000$ ), with doctoral respondents reporting the highest scores, followed by master’s, and bachelor’s degree holders. Educational attainment similarly influenced TC ( $F=7.691$ ,  $p=0.001$ ), where doctoral respondents again reported the highest competency levels. This highlights a positive relationship between educational level and perceptions of DL as well as TC.

Table 14. Differences in Deans’ DL and Lecturers’ TC across Educational Levels.

	Highest Degree (Mean ± SD)			F	p
	Bachelor’ s(n=25)	Master’ s(n=122)	Doctoral(n=47)		
Deans’ DL	2.39±0.37	2.91±0.61	3.22±0.51		
Lecturers’ TC	2.81±0.44	3.17±0.64	3.39±0.53		
* $p<0.05$ ** $p<0.01$					

Source: Prepared by authors

(2) Influence of Professional Title on DL and TC

Significant differences were observed concerning professional titles (Table 15) ( $p<0.05$ ). Higher professional ranks corresponded with higher scores in both DL ( $F=15.563$ ,  $p=0.000$ ) and TC ( $F=5.089$ ,  $p=0.002$ ). Notably, associate professors and professors rated both dimensions higher than assistant lecturers and lecturers.

Table 15. Differences in Deans’ DL and Lecturers’ TC across Professional titles

	Professional Title (Mean ± SD)				F	
	Assistant (n=33)	Lecturer (n=78)	Associate Professor (n=76)	Professor (n=7)		
Deans’ DL	2.38±0.50	2.90±0.57	3.16±0.57	3.07±0.35		
Lecturers’ TC	2.87±0.60	3.15±0.61	3.35±0.59	3.18±0.37		
* $p<0.05$ ** $p<0.01$						

Source: Prepared by authors

Correlation Between Deans’ DL and Lecturers’ TC

Correlation analysis, shown in Table 16, identified significant positive relationships between DL and TC. Each dimension of DL correlated positively with lecturers’ overall TC.



Table 16. Correlation Analysis between Deans' DL and Lecturers' TC

Variable	Mean	Std.	1	2	3	4	5	6	7	8
1. Mission, Vision and Goals	2.884	0.950	1							
2. Organizational Culture	2.970	0.822	0.241**	1						
3. Leadership Practice	2.893	0.904	0.265**	0.259**	1					
4. Shared Responsibility	2.927	0.939	0.237**	0.322**	0.334**	1				
5. Leadership	2.918	0.611	0.658**	0.649**	0.688**	0.708**	1			
6. Planning	3.134	0.920	0.111	0.169*	0.211**	0.127	0.227**	1		
7. Development	3.177	0.779	0.331**	0.322**	0.422**	0.351**	0.528**	0.167*	1	
8. Results	3.222	0.858	0.322**	0.176*	0.253**	0.306**	0.395**	0.252**	0.145*	1
9. TC	3.178	0.613	0.395**	0.364**	0.472**	0.405**	0.606**	0.419**	0.934**	0.422**
* p<0.05 ** p<0.01										

Source: Prepared by authors

### Regression Analysis of the Deans' DL and Lecturers' TC

Linear regression analysis Table 17 was performed to quantify the effects of the four dimensions of DL (mission, vision and goals, organizational culture, leadership practice, shared responsibility) on lecturers' TC, controlling for educational level and professional title. The regression equation is expressed as follows:

TC = 1.382 + 0.039 (Highest Degree) - 0.008 (Professional Title) + 0.145 (Mission, Vision and Goals) + 0.123 (Organizational Culture) + 0.202 (Leadership Practice) + 0.126 (Shared Responsibility)

The regression model accounted for 37.4% of the variance in TC ( $R^2 = 0.374$ ), indicating moderate explanatory power. Leadership practice emerged as the most influential dimension ( $\beta = 0.202$ ). The control variables (highest degree, professional title) do not significantly moderate this relationship.

Table 17. Linear Regression Analysis (n=194).

Variable	Unstandardized coefficient		Standardized coefficient	t	p	Collinearity diagnostics	
	B	Standard error	Beta			VIF	Tolerance
Constant	1.382	0.187	-	7.388	0.000**	-	-
Highest Degree	0.039	0.067	0.038	0.580	0.563	1.285	0.778
Professional Title	-0.008	0.052	-0.011	-0.164	0.870	1.321	0.757
Mission, Vision and Goals	0.145	0.040	0.224	3.602	0.000**	1.155	0.866
Organizational Culture	0.123	0.048	0.165	2.566	0.011*	1.228	0.814
Leadership Practice	0.202	0.044	0.298	4.625	0.000**	1.237	0.808
Shared Responsibility	0.126	0.043	0.193	2.945	0.004**	1.279	0.782
R <sup>2</sup>	0.374						
Adjusted R <sup>2</sup>	0.354						
F	F=18.630, p=0.000						
D-W	2.150						
Note: The dependent variable is lecturers' TC.							
* p<0.05 ** p<0.01							

Source: Prepared by authors

The regression results indicate that all four dimensions of the deans' DL significantly contribute to lecturers' TC:

- a) Mission, Vision, and Goals:  $\beta = 0.145$ ,  $t = 3.602$ ,  $p < 0.01$
- b) Organizational Culture:  $\beta = 0.123$ ,  $t = 2.566$ ,  $p < 0.05$
- c) Leadership Practice:  $\beta = 0.202$ ,  $t = 4.625$ ,  $p < 0.01$
- d) Shared Responsibility:  $\beta = 0.126$ ,  $t = 2.945$ ,  $p < 0.01$

The control variables (educational attainment and professional title) do not directly affect TC significantly ( $p > 0.05$ ). The model accounts for 37.4% of the variance ( $R^2 = 0.374$ ) in TC, passes the F-test, and shows no issues related to multicollinearity or autocorrelation, confirming its validity and reliability.

## CONCLUSIONS

This study confirms that deans' DL significantly and positively affects lecturers' teaching competencies, consistent with DL theory. The theory is focused on distributed and interactive leadership among several members. The research shows that DL among the deans augments lecturers' teaching abilities by explaining mission, vision, and objectives, promoting a favorable organizational climate, extending pragmatic teaching assistance, and urging mutual accountability.

Nonetheless, DL by deans is currently subpar, specifically for mission, vision, and goals. Lecturers teaching abilities, though slightly above average, are still far from satisfactory. Improving DL by deans, specifically explaining mission, vision, goals, and adopting leadership practices and shared responsibility, is essential. Considering current education reform and growing demands for teacher professional development, it is essential to improve DL by deans. Systematic training and actual consultation are needed to utilize DL optimally and increase lecturers' teaching abilities so that they are able to address contemporary education demands.

Among all the dimensions of DL among deans, leadership behaviors exert the strongest influence on lecturers' teaching ability. This is directly attributed to teaching management actions and decisions by the dean, including guiding teaching approaches, optimizing courses, and distributing resources. Practical leadership behaviors directly improve lecturers' classroom management and teaching operation capabilities. For example, when deans visit classes, provide constructive teaching recommendations, and offer professional training and resource assistance, lecturers are able to improve teaching methods rapidly.

In the present research, leadership practices dimension is ranked with a highest regression coefficient, implying a primary aspect of improving lecturers' TC. Strong leadership practices are capable of resolving teaching issues, driving innovation, diversifying teaching approaches, developing a favorable teaching climate, improving teacher exchanges, and enhancing general teaching quality.

Deans' DL plays a strong, positive effect on lecturers' TC with multi-dimensional synergy. Though leadership and teaching competencies are positively influenced by academic titles and educational degrees, there is no imposing impact of significant regulation for leadership influencing lecturers' TC. This shows that there is a relatively independent, strong influence of deans' DL. The dean explains the mission and vision to steer teaching planning, builds a positive culture for motivating lecturers, supports teaching by direct actions, and shares responsibilities for promoting teacher engagement and resource distribution. All of this multi-dimensional working enhances lecturers' TC by making planning, development, and output stronger.

In order to bring about multi-dimensional collaborative enhancement of DL among deans, there is a need to consolidate deans' training with systemic programs that reinforce DL principles and enhance their application. In addition, there is a need to put in place strong communication channels so that there is effective and smooth flow of information among deans and lecturers. On a similar note, motivating deans through experience, allowing them to sharpen approaches, can further improve their leadership. Furthermore, promoting a constructive school culture that enhances teacher interaction and heightens teaching standards together is likely to provide support for effective DL practice. All of these collective measures are likely to improve DL among deans, which, by extension, will improve lecturers' teaching abilities and education quality. These findings are similar to those of Fernandes Altoe et al (2022), who highlighted DL's significance for promoting a collaborative and inclusive school culture, which supports professional development, as well as preventing teacher burnout.

Future studies must address DL's application within varied education contexts and identify measures that can further increase its effectiveness. More studies must also examine DL's long-term influence on educational performance and consider other contextual forces that facilitate or obstruct its use. The studies must also look at DL's ability to solve wider educational issues, including equity and inclusion, and whether it promotes a culture of ongoing improvement and innovation within education institutions.

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