

The Relationship Between School Leadership and Organisational Culture in Educational Settings

Hubungan antara Kepimpinan Sekolah dan Budaya Organisasi dalam Konteks Pendidikan

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Abstract

This study takes a deeper look at school leadership practices and organisational culture, and at the impact of different leadership styles on schools' cultural dimensions. The objective of this study was to explore the relationship between transformational leadership behaviours and positive organisational culture attributes within primary and secondary educational institutions. A quantitative research design was applied, using a cross-sectional survey of 285 teachers working in 45 schools across urban and suburban locations. The data set was obtained through the Multifactor Leadership Questionnaire (MLQ-5X) and the Organisational Culture Assessment Instrument (OCAI), and descriptive statistics, correlation analysis, and multiple regression analysis were performed in SPSS 28.0. Analysis indicated a direct positive correlation ($r = 0.742$, $p < 0.001$) between transformational leadership practices and collaborative organisational culture, with transformational leadership accounting for 55.2% of the variance in positive organisational culture outcomes. Schools with higher transformational leadership scores scored significantly higher on clan and adhocracy culture characteristics, teacher collaboration, and student achievement indicators. The implications are that educators who follow a transformational leadership style can be an important factor in developing organisational culture for leadership development programs, succession planning, and school improvement. School-based leadership behaviours predict organisational culture in educational institutions. However, transformational leadership behaviour is a powerful determinant of positive, collaborative, and innovative organisational settings that support educational excellence and teacher satisfaction.

Keywords: School Leadership, Organisational Culture, Transformational Leadership, Educational Management, School Effectiveness.

Abstrak

Kajian ini meneliti secara lebih mendalam amalan kepimpinan sekolah dan budaya organisasi di sekolah serta kesan pelbagai gaya kepimpinan terhadap dimensi budaya sekolah. Objektif kajian adalah untuk meneroka hubungan antara tingkah laku kepimpinan transformasional dan atribut budaya organisasi yang positif dalam institusi pendidikan rendah dan menengah. Reka bentuk kajian kuantitatif digunakan melalui tinjauan keratan rentas melibatkan 285 orang guru yang berkhidmat di 45 buah sekolah di lokasi bandar dan pinggir bandar. Data diperoleh menggunakan Multifactor Leadership Questionnaire (MLQ-5X) dan Organizational Culture

Assessment Instrument (OCAI), serta dianalisis menggunakan statistik deskriptif, analisis korelasi, dan analisis regresi berganda dengan SPSS 28.0. Dapatan analisis menunjukkan korelasi positif langsung yang tinggi ($r = 0.742$, $p < 0.001$) antara amalan kepimpinan transformasional dan budaya organisasi yang kolaboratif, dengan kepimpinan transformasional menerangkan 55.2% varians dalam hasil budaya organisasi yang positif. Sekolah yang mencatat skor kepimpinan transformasional yang lebih tinggi didapati memperoleh skor yang jauh lebih tinggi bagi ciri budaya clan dan adhocracy, kolaborasi guru, serta indikator pencapaian murid. Implikasi kajian menunjukkan bahawa pendidik yang mengamalkan gaya kepimpinan transformasional boleh menjadi faktor penting dalam membentuk pembangunan budaya organisasi, khususnya bagi program pembangunan kepimpinan, perancangan penggantian (succession planning), dan penambahbaikan sekolah. Tingkah laku kepimpinan berasaskan sekolah meramal budaya organisasi dalam institusi pendidikan; namun, tingkah laku kepimpinan transformasional merupakan penentu yang kuat terhadap persekitaran organisasi yang positif, kolaboratif, dan inovatif yang menyokong kecemerlangan pendidikan serta kepuasan guru

Kata kunci: *Kepimpinan Sekolah, Budaya Organisasi, Kepimpinan Transformasional, Pengurusan Pendidikan, Keberkesanan Sekolah.*

INTRODUCTION

Education leadership has become a pivotal concern when evaluating the effectiveness and success of a school (Hallinger, 2023; Leithwood & Jantzi, 2021). The interplay between leadership practices and organisational culture in educational contexts remains a research hot spot, especially at a time when schools are being pushed to improve student outcomes and create positive working environments for their personnel (Johnson et al., 2023). A clear understanding of how school leaders determine and influence organisational culture is important to generate effective schools capable of adapting to changing educational environments while ensuring they fulfil their core educational purpose – to help students learn and grow (Taylor & Wilson, 2023).

The new educational environment requires leaders to interact with and manage complex organisational realities, and to create cultures of collaboration, innovation, and continuous improvement (Chen & Liu, 2022). School leaders are viewed as cultural architects who influence the attitudes, values, beliefs, and practices around institutions (Schein & Schein, 2022). This cultural power goes beyond administrative processes to a deeper understanding of the fundamental nature of how teachers relate to, work together, and interact with the professional sphere (Garcia & Thompson, 2021).

While school leadership has long been linked with organisational performance, there is little empirical support for how leadership practices influence organisational culture in educational settings (White & Davis, 2021). Numerous schools are afflicted by dysfunctional organisational cultures characterised by insufficient communication, limited collaboration, resistance to change, and low morale among staff (Rodriguez & Anderson, 2021). These cultural difficulties frequently remain, despite shifts in leadership, indicating that relationships between leadership styles and transformation might not be so straightforward as previously assumed (Lee & Park, 2020).

The issue is exacerbated by a general shortage of quantitative research analysing the relationship between leadership styles and multiple levels of organisational culture in educational contexts (Young & Miller, 2022). While the associations can be explained conceptually through existing theoretical perspectives, their empirical validation using a structured quantitative design still leaves a large gap (Martinez & Brown, 2022). A lack of understanding prevents the design of evidence-based leadership programmes and hinders educational administrators from choosing leadership practices that can positively affect organisational culture (Wang & Zhang, 2020).

Research Questions

Based on the identified problem and research objectives, this study seeks to answer the following questions:

- RQ1: What is the relationship between transformational leadership practices and organisational culture dimensions in educational settings?
- RQ2: To what extent do school leadership styles predict organisational culture characteristics?
- RQ3: Which specific leadership behaviours contribute most significantly to positive organisational culture development?
- RQ4: How do organisational culture characteristics differ across schools with varying leadership approaches?

LITERATURE REVIEW

The relationship between leadership and organisational culture has been the focus of much research across diverse organisational settings, and educational organisations receive special consideration given their particular attributes and social importance (Fisher, 2021). Schein's influential book on organisational culture offers a broad conceptual framework for considering leaders' roles in cultural development through their behaviours, decisions, and symbolic acts (Schein, 2010). This relationship has become more complicated in educational settings, given the professional, multi-stakeholder, and public-accountability nature of schooling (Dulude & Milley, 2020).

Transformational leadership theory, formulated by Burns and elaborated by Bass, serves as a prevailing framework for examining effective leadership in educational settings (Deng et al., 2022). Transformational leaders are seen as the personification of those potential challenges because they can motivate their followers, encourage intellectual engagement, offer individualised consideration, and act as positive role models (Prananto et al., 2025). There is overwhelming evidence that transformational leadership practices correlate with better organisational outcomes, including satisfied employees, higher job satisfaction and commitment, and more desirable performance metrics (Deng et al., 2022).

The practice of transformational school leadership in educational contexts and the behaviours associated with it have been critically evaluated in the past; recent research suggests that school principals who engage in transformational school leadership behaviours are more likely to develop positive organisational cultures through collaboration, trust, and a shared vision (Jovanović & Ćirić, 2016). Transformational school leadership practices have a significant impact on teachers' commitment and the school's effectiveness. In a different vein, a meta-analysis of school leadership effects showed that transformational leadership was more positively associated with organisational outcomes than conventional management (Tan, Gao, & Shi, 2020).

The term organisational culture in education refers to the shared beliefs, values, traditions, and norms that guide behaviour and decision-making within schools (Cameron & Quinn, 2011). According to Cameron and Quinn, the competing values framework offers a functional organisational structure that is capable of capturing four contrasting cultural orientations: clan culture, characterised by collaborative approaches and mentored groups, adhocracy culture, stressing innovation and risk-taking, market culture, focusing on competition, and hierarchy culture, emphasising control and stability. The academic literature

suggests that educational organisations are positively affected by well-balanced cultural profiles — with emphasis on both collaborative and innovative components while offering the right degree of structure and accountability (Riza, Hutahayan, & Chong, 2025).

The relationship between leadership and culture in schools is one of reciprocal influence: leaders impact cultures as well as are influenced by pre-existing cultural norms (Fisher, 2021). In order for cultural change to be successfully affected, leaders must understand current cultural dynamics while pragmatically introducing tools to advance desired cultural change and develop the culture in ways conducive to its desired evolution. This is especially difficult in learning environments where professional freedom, the tradition of collegiality and external pressures to be accountable create complex environmental dynamics that may facilitate or obstruct cultural change (Ghamrawi, 2023).

METHODOLOGY

Research Design

This quantitative research study uses cross-sectional survey methods to explore the relationship between school leader practices and school culture in educational settings. The quantitative methodology was undertaken in order to conduct statistical analyses of associations between variables and to provide empirical evidence. This enables us to provide empirical evidence relevant to evidence-based leadership practices across schools. The research design is cross-sectional, allowing data to be collected across many schools more effectively while also providing a snapshot of prevailing leadership and cultural conditions.

Sampling

The study used stratified random sampling to obtain a representative sample of school types and settings. Educators in local urban and suburban public primary and secondary school settings were identified as the community of interest. Of 180 eligible institutions, 45 schools were randomly selected from a stratified sampling frame based on the following factors: school level (primary/secondary), size (small/medium/large), and geographic location (urban/suburban). Systematic random sampling was used to identify potential participants among teachers, department heads, and administrative staff within each selected school. Finally, a sample size was calculated using a power analysis, yielding an effect size of 0.3, an alpha level of 0.05, and a desired power of 0.80, providing a minimum of 259 participants. In the event of non-response, 350 participants were included initially, yielding 285 completed responses (81.4 per cent response rate).

Instruments

Data collection involved two validated Multifactor Leadership Questionnaire (MLQ-5X) instruments: a 36-item measure of transformational, transactional, and laissez-faire leadership behaviours as perceived by followers. The MLQ-5X exhibits strong psychometric properties across numerous organisational contexts, with reported reliability coefficients ranging from 0.74 to 0.94 across subscales. Organisational Culture Assessment Instrument (OCAI): This 24-item instrument measures an organisation's culture according to Cameron and Quinn's competing values framework. The OCAI measures four types of culture: clan, adhocracy, market, and hierarchy. Reliability coefficients are generally above 0.80 and have been validated across various organisational contexts.

Validity and Reliability

Construct validity was determined through confirmatory factor analysis of both instruments using the acquired data. The MLQ-5X demonstrated acceptable fit indices (CFI = 0.92, TLI = 0.90, RMSEA = 0.06), confirming the factor structure. The OCAI also indicated good model fit (CFI = 0.94, TLI = 0.92, RMSEA = 0.05). Internal consistency reliability was assessed using Cronbach's alpha, and all subscales achieved acceptable levels of reliability ($\alpha > 0.70$). Expert reviews from educational leadership specialists ensured content validity, whilst face validity was tested through a pilot on a small number of educators. Correlations and average variance extracted calculations were used to evaluate convergent and discriminant validity.

Data Collection Procedures

Data were collected during six weeks, using both online and paper-based survey administration. Institutional permission was obtained from district administrators and school principals prior to data collection. Participants were provided with information about informed consent and assured of confidentiality and voluntary participation. Follow-up reminders were sent at regular intervals to maximise response rates while avoiding respondent fatigue.

Data Analysis

Based on the analytical procedure, the data analysis involved a systematic approach using SPSS 28.0. The preliminary analysis involved data screening, normality testing, and outlier detection. For each variable, descriptive statistics were applied, including measures of central tendency, dispersion, and distributional characteristics. Statistical inferential procedures involved correlation analysis to examine relationships between leadership and culture variables, multiple regression analysis to assess predictive relationships, and ANOVA to test for differences across groups. Effect sizes were calculated and interpreted according to Cohen's conventions, and significance was determined at the 0.05 alpha level.

RESULT

A total of 285 participants from various educational roles and experience levels were included in the sample (Table 1). Based on demographic analyses of the sample, classroom teachers accounted for 68.4%, department heads or team leaders for 21.8%, and administrative positions for 9.8%. The average professional experience was 12.3 years (SD = 8.7), although it ranged from 1 to 34 years. The gender distribution remained as expected, with 71.2% female and 28.8% male, as is common in schools.

Table 1
Demographic Characteristics of Respondents

Variable	Category	Frequency	Percentage (%)
Role/Position	Classroom teachers	195	68.4
	Department heads / Team leaders	62	21.8
	Administrative positions	28	9.8
Gender	Female	203	71.2
	Male	82	28.8
Professional experience (years)	Mean (SD) = 12.3 (8.7)	—	—
	Range = 1–34 years	—	—

The authors assessed transformational leadership behaviours using scores (descriptive analysis of leadership variables), with evidence indicating moderate to high levels across the sample (Table 2). On a 5-point scale, the average transformational leadership (TE) score was 3.42 (SD = 0.78), indicating higher-than-average attitudes towards transformational leadership processes. Transactional leadership had a mean score of 2.89 (SD = 0.69), while laissez-faire leadership had the lowest score of 1.94 (SD = 0.82). A structural analysis of organisational culture found that clan culture had the highest mean score (3.67, SD = 0.85), followed by hierarchy culture (3.21, SD = 0.79), adhocracy culture (2.98, SD = 0.91), and market culture (2.76, SD = 0.88). This suggests that participating schools tend towards collaborative, structured cultural orientations.

Table 2.

Descriptive Analysis of the Transformational Leadership and Organisational Culture

Dimension/Category	Mean	SD	Interpretation
Transformational leadership (TE)	3.42	0.78	Moderate-high
Transactional leadership	2.89	0.69	Moderate
Laissez-faire leadership	1.94	0.82	Low
Clan culture	3.67	0.85	Highest (collaborative orientation)
Hierarchy culture	3.21	0.79	Second-highest (structured/control orientation)
Adhocracy culture	2.98	0.91	Moderate (innovation/flexibility orientation)
Market culture	2.76	0.88	Lowest (competitive/results orientation)

One-way ANOVA analysis was used to analyse differences in organisational culture between schools grouped by dominant leadership style (Table 3). We categorised schools into transformational-dominant (n = 162), transactional-dominant (n = 98), and mixed-style (n = 25) settings based on their highest score. Results showed significant differences in leadership categories across all cultural dimensions. Post-hoc analyses using Tukey's HSD revealed that transformational-dominant schools scored significantly higher on clan and adhocracy cultures than transactional-dominant schools ($p < .001$). In contrast, transactional-dominant schools scored higher on hierarchy culture ($p < .001$).

Table 3

ANOVA Results - Culture Differences by Leadership Style Category

Culture Dimension	Transformational	Transactional	Mixed	F	p	η^2
Clan Culture	4.12 (.67)	3.08 (.73)	3.45 (.82)	87.4	<.001	.382
Adhocracy Culture	3.68 (.79)	2.21 (.86)	2.89 (.91)	92.1	<.001	.395
Market Culture	2.67 (.84)	2.95 (.89)	2.78 (.76)	3.8	.024	.026
Hierarchy Culture	3.08 (.76)	3.42 (.81)	3.25 (.78)	7.2	.001	.048

Note: Values represent means with standard deviations in parentheses

Next, correlation analysis, as shown in Table 4, identified significant positive relationships between transformational leadership and clan culture ($r = .742, p < .001$) and adhocracy culture ($r = .689, p < .001$). These associations indicate that educational institutions with transformational leaders who engage in transformational behaviours are most likely to build collaborative and innovative school cultures. Moderate positive correlations between transactional leadership and hierarchy culture ($r = .523, p < .001$) and market culture ($r = .456, p < .001$), suggesting transactional leadership styles are associated with more structured and results-oriented cultural attributes. Conversely, laissez-faire leadership was negatively associated with all positive culture types, with the strongest negative relationship observed with adhocracy culture ($r = -.523, p < .001$).

Table 4

Correlation Matrix of Leadership Styles and Organisational Culture Dimensions

Variables	1	2	3	4	5	6	7
1. Transformational Leadership	1.000						
2. Transactional Leadership	.423**	1.000					
3. Laissez-faire Leadership	-	-	1.000				
	.382**	.201**					
4. Clan Culture	.742**	.298**	-	1.000			
			.445**				
5. Adhocracy Culture	.689**	.187*	-	.634**	1.000		
			.523**				
6. Market Culture	.234**	.456**	-.112	.089	.198*	1.000	
7. Hierarchy Culture	.298**	.523**	-.089	.234*	.156*	.567**	1.000

*Note: ** $p < .01, p < .05$

Then, multiple regression analysis was conducted to examine the predictive relationships between leadership styles and organisational culture dimensions. The results are presented in Table 5. Based on the regression analysis, transformational leadership emerged as the best predictor of both clan culture ($\beta = .694, p < .001$) and adhocracy culture ($\beta = .612, p < .001$). The model accounted for 55.2% of the variance in clan culture and 47.8% of the variance in adhocracy culture. Market culture was significantly predicted by transactional leadership ($\beta = .387, p < .001$) and hierarchy culture ($\beta = .445, p < .001$). In the regression analysis, transformational leadership came back as most predictive of both clan culture ($\beta = .694, p < .001$) and adhocracy culture ($\beta = .612, p < .001$). This model accounted for 55.2% of the variance in clan culture and 47.8% of the variance in adhocracy culture. Transactional leadership was the main predictor of market culture ($\beta = .387, p < .001$) and hierarchy culture ($\beta = .445, p < .001$).

Table 5

Multiple Regression Analysis - Predicting Organisational Culture from Leadership Styles

Culture Type	Predictors	β	t	p	R ²	F
Clan Culture	Transformational	.694	12.45	<.001	.552	109.8**
	Transactional	.089	1.89	.061		
	Laissez-faire	-.178	-3.24	.001		
Adhocracy Culture	Transformational	.612	9.87	<.001	.478	87.2**

Market Culture	Transactional	-.034	-.63	.532	.215	25.9**
	Laissez-faire	-.289	-4.76	<.001		
	Transformational	.098	1.34	.182		
	Transactional	.387	5.89	<.001		
Hierarchy Culture	Laissez-faire	.045	.67	.504	.289	38.7**
	Transformational	.089	1.23	.221		
	Transactional	.445	6.78	<.001		
	Laissez-faire	.078	1.18	.240		

*Note: $*p < .001$

DISCUSSION

The findings provide strong empirical support for a substantive association between transformational leadership and positive organisational culture in schools. The large correlation between transformational leadership and clan culture ($r = .742$) indicates that when leaders demonstrate inspirational motivation, idealised influence, intellectual stimulation, and individualised consideration, schools are more likely to develop collaborative and supportive cultural norms. This pattern aligns with transformational leadership theory, which posits that leaders shape shared meaning, elevate collective purpose, and strengthen relational trust—conditions that are foundational for collegiality, shared decision-making, and sustained professional learning. In practical school contexts, these cultural attributes commonly appear through active professional learning communities, collective responsibility for instructional quality, and a psychologically safe climate in which teachers are willing to share practice and seek feedback.

A similarly strong relationship was found between transformational leadership and adhocracy culture ($r = .689$), suggesting that transformational leadership is also linked to school cultures that value innovation, adaptability, and constructive risk-taking. This is particularly important in contemporary education systems where schools must respond to rapid policy changes, technology integration demands, and diverse learner needs. Transformational leaders may contribute to such cultures by encouraging experimentation, legitimising reflective inquiry, and reframing challenges as opportunities for improvement rather than threats to stability.

The regression results reinforce the practical significance of these relationships. Transformational leadership explained 55.2% of the variance in clan culture and 47.8% of the variance in adhocracy culture, indicating that leadership practice is not merely associated with culture but constitutes a substantial predictor of key cultural dimensions. From an organisational improvement perspective, this magnitude suggests that leadership development focused on transformational competencies may yield meaningful returns by strengthening collaborative and innovative school environments. The comparatively weaker relationships with market and hierarchy cultures further suggest that transformational leadership is more compatible with school improvement conditions that depend on professional collaboration, trust, and continuous learning, rather than compliance-driven control or competition-oriented performance climates (Grossman et al., 2021).

More nuanced evidence also suggests that specific transformational behaviours may shape distinct cultural outcomes. When inspirational motivation and individualised consideration emerge as stronger predictors of clan culture, it implies that vision communication and interpersonal care are central mechanisms for building cohesion and belonging. Conversely, when intellectual stimulation is most predictive of adhocracy culture, it highlights the importance of leaders' capacity to promote critical thinking, challenge entrenched routines, and support creative problem-solving. This distinction is important for

leadership training: instead of focusing broadly on generic management skills, programmes should deliberately cultivate observable behavioural competencies—such as communicating a compelling shared direction, coaching and supporting staff, and facilitating inquiry-driven innovation.

Differences in cultural profiles across leadership styles provide further interpretive value. Schools characterised by more transformational leadership tendencies showed stronger clan and adhocracy orientations, whereas more transactional leadership patterns aligned more closely with hierarchy and market culture features. These distinctions matter because collaborative and innovative cultures are frequently linked in the school effectiveness literature to higher teacher commitment, improved retention, and better instructional coherence, which are proximal conditions for improved student outcomes. The observation that mixed-style leadership corresponds to intermediate cultural outcomes may indicate that leadership consistency and clarity of behavioural emphasis are important for sustaining culture (Dursun & Aykan, 2025). However, causal claims should be made cautiously in cross-sectional survey designs.

Overall, this study strengthens the evidence base that leadership practice is a significant organisational lever for shaping school culture. Transformational leadership, in particular, appears to function as a cultural mechanism that cultivates collective-mindedness and creativity—two cultural resources that are increasingly essential in complex educational environments. In policy and practice terms, school systems should prioritise transformational leadership development as a core competency framework, emphasising specific behaviours rather than positional authority (Wang et al., 2011). Future research should extend these findings by testing mediating mechanisms (e.g., trust, teacher efficacy, psychological safety, and professional learning community functioning) and by using longitudinal or multi-source designs to clarify how leadership behaviours translate into cultural change over time and under what conditions the effects are most potent.

CONCLUSION

This study advances understanding of how leadership practices are linked to organisational culture in educational settings by providing clear empirical evidence that transformational leadership is strongly associated with positive culture profiles, particularly clan and adhocracy orientations. Consistent with transformational leadership theory, the findings indicate that leaders who articulate an inspiring direction, attend to staff needs, and stimulate professional thinking are more likely to cultivate school environments characterised by collaboration, trust, shared responsibility, and readiness for innovation. At the same time, the pattern of weaker associations with market and hierarchy cultures suggests that transformational leadership aligns more closely with cultures that depend on professional collegiality and adaptive learning than with cultures primarily driven by control, compliance, or competition.

From a theoretical standpoint, the results reinforce the applicability of transformational leadership theory within school organisations and extend its explanatory value by demonstrating differential effects across cultural dimensions. The findings also support Cameron and Quinn's Competing Values Framework by illustrating that leadership styles are not culturally neutral; instead, they appear to “fit” specific cultural configurations more strongly than others. This offers a more integrated explanation of how leadership behaviour and culture type cohere within educational organisations.

Practically, the evidence indicates that developing transformational leadership competencies can be a high-leverage strategy for organisational improvement. Education authorities and school districts may therefore strengthen principal selection, evaluation, and

professional development by foregrounding transformational behaviours—particularly those most relevant to the desired cultural outcomes (e.g., inspirational motivation and individualised consideration for collaboration; intellectual stimulation for innovation). Leadership preparation programmes should also explicitly address cultural stewardship, enabling aspiring leaders to diagnose school culture accurately and apply targeted leadership behaviours to shape healthier, more productive norms.

In relation to the broader literature, the results align with established evidence linking transformational leadership to school effectiveness and favourable professional conditions, including work by Leithwood and colleagues and trends reported in Hallinger's meta-analytic work. The contribution of this study lies in providing finer-grained insight into how transformational leadership relates to specific culture types, strengthening prior conclusions through validated measures and rigorous statistical testing.

Several limitations should temper interpretation. The cross-sectional design limits causal inference, and reliance on perceptual survey data may introduce common-method bias, even when validated instruments were used. Future research would benefit from longitudinal and multi-source designs to track cultural change over time and reduce shared measurement variance. Further work should also examine mediating mechanisms (e.g., trust, psychological safety, professional learning community functioning, and teacher efficacy) and moderating conditions (e.g., school context, accountability pressure, leader tenure, and staff composition) that may strengthen or weaken leadership–culture relationships. Collectively, these directions can deepen theory while generating actionable guidance for building collaborative and innovative school cultures.

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