

The Effect of School Principals' Critical Leadership Behaviors on School Climate According to Teacher Perceptions

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Abstract

The aim of the study is to determine whether school principals' critical leadership behaviors have an effect on the school climate. For this purpose, data were collected from 836 teachers working in different types of public schools in the province of İstanbul, using the relational survey model, by using the easily accessible sampling method. For the analysis of the data obtained through Demographic Information Form, Critical Leadership Scale and School Climate Scale, SPSS 22.0 package program was used. After the normality test, from the parametric tests; Pearson Product Moments correlation coefficient and multiple regression analyzes were performed. As a result of the findings, teachers' critical leadership and school climate perceptions were determined at a high level. According to teacher perceptions, a positive and moderate correlation emerged between the critical leadership behaviors of school principals and the school climate. In addition, it was concluded that critical leadership behaviors predict school climate. In the light of these findings, suggestions were made regarding the relationship between critical leadership and school climate.

Key Words: Critical Leadership, School Climate, School Principals, İstanbul Case.

Öz

Araştırmanın amacı, okul müdürlerinin eleştirel liderlik davranışlarının okul iklimine etkisinin olup olmadığını belirlemektir. Bu amaç doğrultusunda çalışmada veriler, ilişkisel tarama modeli kullanılarak İstanbul iline bağlı farklı türdeki devlet okullarında görev yapan 836 öğretmenden veriler kolay ulaşılabilir örnekleme yöntemi ile toplanmıştır. Demografik Bilgi Formu, Eleştirel Liderlik Ölçeği ve Okul İklimi Ölçeği aracılığı ile elde edilen verilerin analizi için SPSS 22.0 paket programı kullanılarak yapılmıştır. Normallik testinin ardından parametrik testlerden; Pearson Momentler Çarpımı korelasyon katsayısı ve çoklu regresyon analizleri yapılmıştır. Bulgular sonucunda öğretmenlerin eleştirel liderlik ve okul iklimi algıları yüksek düzeyde belirlenmiştir. Öğretmen algılarına göre okul müdürlerinin eleştirel liderlik davranışları ile okul iklimi arasında pozitif yönde anlamlı, orta düzeyde korelasyon ortaya çıkmıştır. Ayrıca eleştirel liderlik davranışlarının okul iklimini yordadığı sonucuna ulaşılmıştır. Bu bulgular ışığında eleştirel liderlik ve okul iklimi ilişkisine yönelik önerilerde bulunulmuştur.

Anahtar Kelimeler: Eleştirel Liderlik, Okul İklimi, Okul Müdürleri, İstanbul Örneği.

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Introduction

Throughout history, human beings have not allowed living creatures or things to remain in their original form, but they have constantly changed and transformed them (Rousseau, 2021). It can be said that there have been wide-ranging changes in both organizations and leaders and perceptions regarding leadership in this transformation process. It can be stated that these changes from the Great Man Theory (Buluç, 2019), which was first put forward in the scientific sense and believed to be innate in leadership, to today's leadership understandings are so great that they make it necessary for leaders to approach even their own decisions critically and change their decisions when necessary.

It is seen that there are a variety of definitions made on the concept of leadership throughout the literature. Turan (2020) defines leadership as the process of influencing and activating individuals and groups in line with common goals. Shaw (1981) states that a leader is the one that has the support of the group members psychologically and can influence the behavior of the group without resorting to external authority, and therefore he identifies the leader as the group member who has a positive effect on others or the member who has a greater positive impact on others than they have on themselves. Yukl (2018) states that there is an assumption that leadership is a process that includes directing, structuring or facilitating activities and relationships in a group or organization by making a deliberate impact on people. On the other hand, Robbins and Judge (2020) say that leadership can be described as the capacity to influence a group to fulfil the aims or the vision.

Today's organizations show very different characteristics from the old organizational structures and this makes it necessary for leaders to develop new skills. (Yurdasever & Fidan, 2020). For this reason, it is inevitable that a leader needs to think analytically today and in order to do this, it is necessary for him to approach the subjects critically (Şahin, 2020). Critical thinking is the method of thinking that an individual performs purposefully and under his control, avoids the

usual, tests prejudices, assumptions and all kinds of information, analyzes and evaluates ideas, compares, and ends up with certain behaviors eventually (Gürkaynak et al., 2003). Özdemir (2005) defines critical thinking as proving the accuracy, truth and reliability of an information or a claim, making use of various criteria while making a decision, trying to obtain evidence about what is read or heard, and asking for proof before accepting others' claims or thoughts, and mental or intellectual skills such as openness, honesty, consistency and accuracy. Critical thinking is the key for an effective decision making at every stage of the solution process from the moment the problem is observed (Şahin, 2020). Facione (1990) defines the ideal critical thinker as someone who is always curious, fair in his evaluations, willing to rethink and who honestly confronts personal prejudices. On the other hand, critical leadership is defined by Jenkins and Cutchens (2011) as applying critical thinking while making decisions regarding leadership actions in various cases and they identify 12 practices which a leader can adopt to lead critically;

- Being aware of the context of the situation and evaluating the effects of decisions,
- Knowing the strengths and weaknesses of the followers and guiding or strengthening them accordingly,
- Understanding the process before initiating the change,
- Being purposeful and considering the organization's mission and values while making decisions
- Take the time to understand the diversity of others' decisions, values, and views.
- Being flexible and open-minded while making decisions,
- Using others where they are, not where you want them to be,
- Asking questions and listening appropriately,
- Accepting, internalizing and applying constructive criticism,
- Evaluating assumptions before attempting to correct them.
- Encouraging critical followers,
- Acting consciously.

(Jenkins & Cutchens, 2011)

It is thought that today's leaders are required to have critical thinking skills in order to adapt to the changing environment (Aygün & Özgenel, 2019) because critical thinking plays an active role in the creation of creative ideas by getting rid of monotony as a result of the current thoughts, situations or phenomenon not being as popular as before, not being able to respond to others' wishes, and boredom experienced by those who want constant change (Küçükali & Akbaş, 2015).

As reported by Hoy and Miskel (2020), "the organizational climate of the school is the qualities related to the school environment that distinguishes that school from others and affects the behaviour of each member of that school". Forehand and Von Haller (1964) consider organizational climate as the aspects that define an organization and feature it among other organizations, become permanent in time and affect people's behaviour. Organizational climate is thought to be highly important for the organization as it has an impact on human behaviour, because while many organizations have the same technological infrastructure, similar manpower and material resources, they differ in terms of organizational outputs, success and performance. Many studies conducted in this context show the concept of organizational climate as the common feature of effective and successful schools among many other different features (Özgenel, 2020a).

The positive relations between the employees, the respect the members have for each other, democratic management, fair discipline policy, being open to new ideas, and the presence of trust are the indicators of a healthy school climate (Göksoy, 2021). Teachers working in the institutions with a positive school climate do not feel burnout and see themselves as a valuable employee of the organization (Yazıcı, 2020). On the other hand, negative school climate causes many problems. Howard, Howell and Brainard (1987) identify the symptoms of climate problems in a school as high student-absenteeism, frequent disciplinary problems, vandalism, student unrest, low staff motivation, large numbers of underachievers, etc. Within this context, it can be said that the school climate must first be changed

and improved in order for the school improvement initiatives to have the desired effects (Özgenel, 2020a).

When the studies on critical leadership and organizational climate are examined, it is seen that Saylık (2015) reveals that the critical leadership competence of primary, secondary and high school principals is at a moderate level while Aygün (2018) states that school administrators have a high level of critical leadership style. Gök (2009), in his research on the banking sector, argues that organizational climate affects the performance, effectiveness, efficiency and therefore the motivation of employees. Likewise, Çekmecelioglu (2005), in his research on business firms, claims that in a climate where creativity is perceived to be positively supported, job satisfaction increases and the tendency to quit the job decreases. Şenel and Buluç (2016) and Özgenel (2020b) state that school climate is an important factor to increase the effectiveness of schools. Bahçetepe and Meşeci Giorgetti (2015) express that a strong positive relationship is observable between the supportive teacher behaviours and success orientation. Among the studies on the relationship between school climate and leadership, it is seen that Ayık and Şayir (2014) state that organizational climate dimensions are positively and moderately related to all dimensions of instructional leadership. Varlı (2015) claims that when school principals display autocratic leadership behaviours, a closed school climate emerges at schools, and when they show democratic leadership characteristics, an open school climate emerges at schools.

As a result, the main factors affecting the climate type of the organization are the ways the principals perform a task, and their attitudes, behaviours and competencies; and organizations are shaped according to the style of their leaders (Parlar, 2020). In addition, creating a strong school climate and maintaining it are the most important priority of school principals (Dağlı, 2021). When Aygün (2018) and Saylık' s (2015) suggestion, the fact that there are few studies on critical leadership in the literature and that a leader's critical thinking skills can affect the dimensions which form the school climate are considered, the purpose of this study has been determined to find out the effect of

school principals' critical leadership behaviours on school climate according to teacher perceptions. In line with this aim, the research questions were determined as follows:

1. Is there a relationship between the school principals' critical leadership style perceived by the teachers and the school climate?
2. Does the leadership style of the school principals perceived by the teachers predict the school climate?

Method

Research Design

This study aims at determining the effect of the school principals' critical leadership behaviours on the school climate. To achieve this purpose, the relational survey model, which is among the quantitative research methods, was applied as the research model. Karasar (2006) defines the relational survey model as a model that shows the relationship among the variables. Correlation and regression techniques were also used in the study. The relationship among the variables is examined in the correlation technique. In the regression technique, it is aimed to identify the degree of prediction of the variables on each other (Büyüköztürk et al., 2018).

Population and Sample

The research population includes the teachers who work in various types of public schools affiliated under the Ministry of National Education in Istanbul in the 2021-2022 academic year. The reason why Istanbul was selected as the research area is that Istanbul shows maximum diversity in terms of various thoughts, political views, religious beliefs, and socioeconomic status. The official permission was obtained from the Governorship of Istanbul and the Provincial Directorate of National Education in order to work with this population, and then the data collection process was initiated. 165,997 teachers are working in Istanbul in the 2021-2022 academic year (Istanbul.meb.gov.tr/28.12.2021). For the research, a minimum sample size of 383 was calculated

from the population of 165,997 teachers (surveysystem.com/sscalc.htm). Although it is thought that there may be some differences between education levels in the research, education level distinction was not made in order to present a general framework. The study sample was determined with the convenience sampling method. The convenience sampling means selecting the sample from easily accessible groups because of the time, money and labour limitations (Büyüköztürk et al., 2018). In the study, data were collected from all districts of Istanbul and 882 teachers were reached. However, 46 scale forms were excluded from the analysis because they were either incomplete or incorrect. Descriptive statistical information regarding 836 teachers participating in the research is presented in Table 1 below.

Table 1. Descriptive Information Regarding Teachers

Variables	f	%	
Gender	Male	269	32,2
	Female	567	67,8
Education	BA Degree	711	85,0
	Postgraduate Degree	125	15,0
Type of School	Primary School	293	35,0
	Middle School	333	39,8
Professional Experience	High School	210	25,1
	0-5 Years	282	33,7
	6-10 Years	170	20,3
	11-15 Years	116	13,9
	16+	268	32,1
Total	836	100	

According to Table 1, 32.2% of 836 teachers participating in the research are male and 67.8% of them are female teachers. While 85.0% of the teachers hold BA degrees, 15.0% of them have completed their postgraduate studies. 35.0% of the teachers participating in the research work in the primary school, 39.8% in the secondary school and 25.1% in the high school. While 33.7% of the teachers has been working for 0-5 years, 20.3% for 6-10 years, 13.9% for 11-15 years, 32.1% of them has been working for more than 16 years.

Data Collection Tools

The data collection process involves three parts. *The first part* is the demographic information section, which includes questions about gender, education level, type of school and professional

experience. *In the second part*, the Identification of the Critical Leadership Behaviours Scale was used. This scale consists of 4 sub-dimensions as Open-Mindedness and Flexibility, Critical Decision Making and Actions, Research and Communication, Focusing on Development and Decision Making and 30 items in total. Regarding the Cronbach Alpha reliability coefficient of the dimensions of the Critical Leadership Scale; it was found to be .960 for Open-Mindedness and Flexibility; .960 for Critical Decision Making and Actions; .956 for Research and Communication; .955 for Focusing on Development and Decision Making. Cronbach Alpha general reliability coefficient was calculated as 0.986. Cronbach Alpha values close to 1 reveal that the scale is highly reliable. To use the Critical Leadership Scale developed by Aygün and Özgenel (2019) and the permission was attained from the relevant researchers to be able to use the scale in the study. The scores that can be obtained on the scale range from 30 to 150. The scale is 5-point scale that is Never-1, Rarely-2, Usually-3, Often-4, and Always-5. *In the third part*, the School Climate Scale was used. The scale was developed by Canlı et al. (2018) as a current, valid, reliable and useful scale to determine the school climate, and the Cronbach Alpha general reliability coefficient of the scale was found to be 0.933. Cronbach Alpha values close to 1 indicate that the scale is highly reliable. While the scale was being developed, the teacher performance evaluation draft published by the Ministry of National Education in 2018 was taken as the basis. The scale consists of five sub-dimensions which are Democracy and Dedication to school, Leadership and Interaction, Success Factors, Sincerity and Conflict and 23 items in total. The scores that are possible to be obtained on the scale range from 23 to 115. The scale is 5-point scale that is Never-1, Rarely-2, Usually-3, Often-4, and Always-5. The items 20, 21, 22, and 23 were reverse coded. The three sections in the data collection tool were combined into a single form. The official permission was obtained from the Istanbul Provincial Directorate of National Education to conduct the research with the teachers in Istanbul. With the permission, the form was administrated to the teachers who work at public schools in Istanbul in the 2021-2022 academic year.

The scales were delivered to the schools through the District Directorates of National Education. While applying the scales, there was no time limit for the teachers to give correct and sincere answers.

Data Analysis

The data obtained within the scope of the research were first entered into the Excel program and then analysed after being transferred to the SPSS 22 package program. With the SPSS 22 program, the normality distribution of the data was firstly calculated and the Skewness and Kurtosis values were examined. The Skewness and Kurtosis values obtained are demonstrated in Table 2.

Table 2. Skewness, Kurtosis and Cronbach's Alpha Analyzes

Points	N	Skewness	Kurtosis	Cronbach's Alpha
Open-Mindedness and Flexibility	836	-.495	-.744	.941
Critical Decision Making and Actions	836	-.593	-.495	.941
Research and Communication	836	-.791	-.200	.937
Focusing on Development and Decision Making	836	-.613	-.484	.939
Critical Leadership Total	836	-.564	-.652	.979
School Climate	836	-.186	-.666	.900

When the Skewness and Kurtosis values of the sub-dimensions of the Critical Leadership Scale and the data of the School Climate Scale are analysed, it is seen in Table 2 that the kurtosis and skewness values are between $-.791 / ,-.186$. These results indicate that the scores of the scales show a normal distribution. A positively skewed distribution has relatively few number of high values and is right-justified. On the other hand, a negatively skewed distribution has relatively few number of low values and is left-justified. The Skewness values out of the range between -1 to $+1$ show a highly skewed distribution (Hair et al., 2009). Parametric tests were preferred to conduct the analysis as the data showed a normal distribution. Pearson Correlation Test was applied to reveal the relationship between the sub-dimensions of the Critical Leadership Scale and the school climate, and a multiple regression analysis

was conducted to define if the critical leadership style predicted the school climate.

Finding

The means and standard deviation values of the scores obtained from the sub-dimensions of the Critical Leadership Scale and the School Climate Scale are given in Table 3.

Table 3. Mean Scores and Evaluation of the Scales

Points	N	M	sd	Evaluation
Open-Mindedness and Flexibility	836	4.19	.65	High
Critical Decision Making and Actions	836	4.12	.72	High
Research and Communication	836	4.25	.74	Very High
Focusing on Development and Decision Making	836	4.14	.79	High
Critical Leadership Total	836	4.17	.67	High
School Climate	836	4.22	.44	High

While interpreting the findings obtained for the analysis of the results, the values were used in all scales as follows: "1.00-1.80 None", "1.81-2.61 Low", "2.62-3.42 Moderate", "3.43- 4.23 High" and "4.24-5.00 Very High".

As can be seen in Table 3, Open-Mindedness and Flexibility was found to be "high" (M=4.19; sd=.65); Critical Decision Making and Actions to be "high" (M=4.12; sd=.72); Research and Communication to be "high" (M=4.25; sd=.74); Focus on Development and Decision Making to be "very high" (M=4.14; sd=.79); and Critical Leadership Total was found to be "high" (M=4.17; sd=.67). According to the data collected with the School Climate Scale, the School Climate was found to be "high" (M=4.22; sd=.44).

Pearson Correlation Analysis was conducted to find out the relationship between critical leadership and its sub-dimensions and school climate according to the teacher perceptions, and the results are presented in Table 4.

Table 4. Correlation Analysis Between Critical Leadership and Its Sub-Dimensions and School Climate

	School Climate	
	p	r
Open-Mindedness and Flexibility	,000	,589**
Critical Decision Making and Actions	,000	,613**
Research and Communication	,000	,594**
Focusing on Development and Decision Making	,000	,586**
Critical Leadership	,000	,632**

** $p < .01$; N=836

According to Table 4, it is clearly seen that there is a positive and medium level ($r = .589$; $.613$; $.594$; $.586$; $.632$ $p < .01$) significant relationship between the school principal's critical leadership style perceived by the teachers and the school climate (including all sub-dimensions).

Multiple regression analysis was conducted to explore if the critical leadership sub-dimensions perceived by the teachers predicted school climate and the results can be found in Table 5.

Table 5. Multiple Regression Analysis Showing Whether School Principals' Critical Leadership Style Predicts School Climate

Independent Variable	Dependent Variable	B	Std. Error	(β)	t	p
Constant		2,516	,078		32,408	,000
Open-Mindedness and Flexibility	School Climate	,119	,037	,176	3,205	,001
Critical Decision Making and Actions		,155	,043	,254	3,622	,000
Research and Communication		,068	,039	,115	1,728	,084
Focusing on Development and Decision Making		,068	,033	,122	2,029	,043

$R = .632$; $R^2 = .400$; $Adjusted R^2 = .397$; $F = 138.402$; $p < .000$

According to Table 5, the school principals' critical decision making and their actions significantly predict the school climate ($\beta = .254$; $R^2 = .400$; $F = 138.402$; $p .01$). The school principals' critical leadership behaviours explain approximately 40% of the total variance in school climate. To state it differently, the principals' critical leadership behaviours positively affect the school climate. As the school principals' critical

leadership behaviours of get stronger, the school climate increases.

Discussion and Conclusion

School leadership, together with the school climate, affects teacher competencies and motivation and therefore has a critical role in enhancing the outcomes (Pont et al., 2008). According to the perceptions of the teachers participating in the research, a positive and medium level relationship was detected between the critical leadership style of the school principals and the school climate. In addition, a medium level of correlation was observed between each of the critical leadership sub-dimensions and the school climate. Aygün (2018) found a moderate relationship between the leadership practices and the critical leadership behaviors of the school principals and mentioned the importance of leadership behaviors to form a pleasant school climate. The researchers, who claim the existence of a positive significant relationship between analytical thinking, inquisitiveness, and self-confidence, which are among the critical thinking tendencies, and the leadership tendencies (Özdemir et al., 2018), state that the critical thinking tendencies of prospective teachers who will be the future education leaders affect their leadership behaviors. According to Şentürk and Saġnak (2012), it can be said that as the leadership behaviors of school principals expand, the motivation, sincerity, close control, work orientation and tolerating increase in the school climate. When the school principal displays a democratic leadership behavior, an open school climate is observed in the school, while an indifferent school climate can be observed in the school when the school principal displays a laissez faire leadership (Varlı, 2015). While the positive perception of leadership behaviors affects the school climate positively (Şentürk & Saġnak, 2012), it is seen that toxic behaviors such as ignorance, self-interest and selfishness create a negative atmosphere in the school climate (Reyhanoġlu & Akin, 2016; Tepe & Yılmaz, 2020).

The fact that the school climate influences the employees and the school mutually in organizational and administrative processes

indicates that it is directly related to the psychological and sociological status of the employees, their attitudes towards work and their motivation. Within this context, the school leader will lead the school's organizational goals and aims by contributing to the general atmosphere that dominates the school. School principals with critical leadership behaviours will be able to create of a school climate that thinks critically, encourages scientific study, research and development, integrates, thinks flexibly, takes differences into consideration, and cares for correct communication.

According to another result, it can be said that the sub-dimensions of critical leadership which are open-mindedness and flexibility, critical decision making and actions, research and communication, focus on development and development explain 40% of the school climate. When the findings regarding the prediction of the school climate in terms of the sub-dimensions of critical leadership were delved into, critical decision-making and actions was observed to be a significant predictor of the school climate. It was revealed that the leadership of the school principal and the school climate had a significant effect on the teacher's work efficiency (Agustina & Kristiawan, 2021). It was also concluded that creative leadership characteristics improved the school climate (Öztürk & Zembat, 2015). Maier (2017) claimed the principal's leadership style was among the most effective aspects of creating a pleasant school climate while Holden (2017) stated that spiritual leadership behaviors predicted the school climate by 44%. It was emphasized that the innovation, justice and belonging climates that form the school climates should be emphasized in the implementation of transformational leadership (Wang, 2019). In addition, it was shown that intellectual encouragement and individual thinking are two characteristics of transformational leadership that could predict the school climate depending on all variables (Garcia, 2018). It was observed that a positive school climate based on respect towards the staff was more prevalent when school principals took action to facilitate cooperation among teachers, enabled teachers to take responsibility to develop their own teaching practices, and made teachers responsible

for their students' learning (Bellibas & Liu, 2016). Research introduces the principals' main role in improving and maintaining teachers' commitment to their workplaces. Teacher-commitment affects teaching, learning, innovation and school climate and is a sign of job satisfaction (Price, 2021). School principals should involve teachers and students in the decision-making processes on all issues related to school management to promote a nice school climate (Amedome, 2018). It is also believed that teachers who will consider their school principals as more transformative will also perceive the school climate more positively (Pinkas & Bulić, 2017).

As supported by the literature, the effect of leadership behaviors of school principals is quite high in forming a positive school climate. As stated in the Vision 2023 document of the Ministry of National Education, determining the leadership styles aimed at developing critical thinking, which is among the 21st century skills, and including it in administrative trainings are critical. In addition, efforts to form a pleasant school climate that is always open to improvement should be supported by in-service trainings.

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