

LEADERSHIP STYLES OF PRINCIPALS IN K-12 SCHOOLS FOR EFFECTIVE SCHOOL ADMINISTRATION: A QUANTITATIVE APPROACH

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Abstract: Effective school administration in K-12 settings is heavily influenced by the leadership styles adopted by principals. The leadership styles of K-12 school principals play a pivotal role in shaping the school culture, fostering teacher collaboration, and ultimately influencing student outcomes. This study aims to examine the difference in different leadership styles of principals in K-12 school for effective school administration. This study employed a survey method and developed a questionnaire based on a literature review to test the proposed hypotheses. Principals from K12 schools located in Delhi/NCR region were selected using a convenience sampling method. Findings showed that there is a significant difference in democratic, autocratic, and laissez-faire leadership styles of principals with regard to gender, age and education.

Keywords: *Democratic, autocratic, laissez-faire leadership styles, K12 school, principal*

1. Introduction

The leadership styles selected by principals have a significant impact on the effectiveness of school administration in K-12 settings (Granillo, 2022). The leadership styles of administrators in K-12 schools have a significant impact on the school culture, promoting teacher collaboration, and eventually affecting student outcomes (Banoğlu et al. 2023; Kılıç et al. 2023). Diverse styles foster innovation, cultivate a collective sense of mission, and establish a favorable school atmosphere (Kilag et al., 2023). Instructional leadership, characterized by principals prioritizing curriculum development, instructional practices, and teacher professional development, has been empirically demonstrated to improve student achievement (Clark et al. 2023). In addition, a well-rounded approach that integrates effective leadership can be especially powerful in successfully managing the intricacies of K-12 school administration (Cox and Mullen, 2023). Principals who demonstrate adaptability in their leadership approaches, according to the changing demands of their schools, showcase their capacity to construct robust, cooperative teams and proficiently tackle obstacles (Irizarry, 2023).

The efficacy of school administration hinges on principals' capacity to modify their leadership approaches in accordance with the distinct requirements of the school and its stakeholders (Baroudi and Hojeij, 2020). An optimal strategy that integrates aspects of these leadership styles can be highly effective, enabling principals to address a wide range of difficulties and possibilities in the ever-changing field of K-12 education (Yokota, 2020). School directors must exhibit introspection and thoughtfulness in their approach, acknowledging that a universal technique may not be appropriate for the intricacies of educational administration (Conan Simpson, 20210). Previous research has identified three prevalent leadership styles for principals, namely democratic, autocratic, and Laissez-faire. The efficacy of democratic, autocratic, and laissez-faire leadership styles in K-12 school



administration stems from their capacity to address a wide range of issues and conditions that are inherent in the educational setting (Parveen et al., 2022). According to Francisco Sr (2020), democratic leadership, which involves working together and making decisions collectively, increases teacher involvement and promotes a favorable school environment. This methodology facilitates inventive resolutions and fosters a feeling of proprietorship among individuals involved, so enhancing a vibrant and adaptable educational collective (Anderson, 2021; Shepherd-Jones and Salisbury-Glennon, 2028).

Autocratic leadership, characterized by its authoritative style and decisive decision-making, may be highly effective in critical and time-sensitive situations, offering stability and unambiguous guidance (Batoool et al., 2023). Although not consistently favored, it provides a practical resolution when prompt and resolute measures are necessary. Laissez-faire leadership, which involves delegating decision-making authority to subordinates, enables educators and staff to cultivate innovation and individual accountability (Broyles, 2022). While this method necessitates a competent and internally driven group, it can be efficacious in fostering innovation. Successful school administration hinges on the prudent use of many leadership styles, with principals adjusting their approach according to the particular requirements and circumstances in the K-12 educational environment (Stein et al., 2016). An intricate and adaptable leadership approach, including aspects of different types, enables a customized reaction to the complex requirements of K-12 education. Additional investigation is required to examine the intricate interaction of leadership styles in many educational environments, taking into account elements such as demography, in order to obtain a thorough comprehension of successful school management in the K-12 setting.

2. Literature review and hypothesis development

2.1 Democratic style and demographics

The democratic leadership style can be demonstrated by principals of both genders, although its manifestation may be impacted by individual characteristics, experiences, and contextual factors rather than being solely determined by gender (Kiboss and Jemiryott, 2014). Both male and female principals who adopt a democratic leadership style prioritize open communication and collaboration (Uko, 2002; Jackson, 2023). Female principals may be regarded as stressing the establishment of relationships and the cultivation of a collaborative atmosphere, whereas male principals can be considered as emphasizing decision-making efficiency (Tiwari, 2021). The age of a principal can undoubtedly impact their democratic leadership style, as age is generally associated with a variety of experiences, viewpoints, and approaches to leadership (Kotur and Anbazhagan, 2014). Senior principals can contribute a substantial amount of expertise and sagacity to their positions of leadership. Such an experience can enhance their approach to democratic leadership, as it can provide them with a more comprehensive comprehension of the advantages of inclusivity, collaboration, and shared decision-making. Principals of a younger age may exhibit greater receptiveness towards embracing innovative methodologies and novel strategies, such as the implementation of democratic leadership. It is possible that they were introduced to modern leadership theories during their academic and career advancement (Barbuto et al. 2007). The educational background of a principal can have a substantial impact on the acceptance and efficacy of a democratic leadership approach. Principals possessing varied educational degrees can effectively execute democratic leadership, and effective leadership frequently necessitates a fusion of educational expertise and practical acumen acquired via field experience. Based on previous findings, we propose that

H1 There is a significant difference in democratic style of principal with respect to gender

H2 There is a significant difference in democratic style of principal with respect to age

H3 There is a significant difference in democratic style of principal with respect to education

2.2 Autocratic style and demographics

The leadership style of a principal, which may involve adopting an authoritarian approach, can be influenced by other aspects, such as gender (Torlak et al. 2022). Perceptions of leadership styles might be influenced by societal expectations and preconceptions around gender roles (Babiak & Bajcar, 2019). Historically, autocratic leadership has been correlated with assertiveness and decisiveness, characteristics that have occasionally been stereotypically attributed to male leaders (Peker et al. 2018). Consequently, there can be societal norms that anticipate male principals to be more inclined towards adopting an authoritarian leadership style. The educational qualifications of a principal, which may include specialized training in educational leadership or administration, might also have an impact (Maseti and Gumede, 2011). According to Yazdi et al. (2014), training programs that focus on participatory and collaborative leadership can reduce the impact of gender on leadership style. Experienced principals, especially those with a long history in educational leadership, may have encountered conventional leadership principles that prioritize power, decisiveness, and control (Tiwari, 2021). This exposure has the ability to influence their leadership style, maybe resulting in a predilection for authoritarian decision-making (Mshelia and Emmanuel, 2021). According to Harms et al. (2018), younger principals, who are more familiar and at ease with quick advancements in technology and educational methods, are likely to be more flexible and receptive to novel concepts. Conversely, senior principals may occasionally favor stability and control, exhibiting characteristics of autocratic leadership (Mincu, 2022). Irrespective of their age, principals have the ability to incorporate different leadership strategies to tackle the intricacies of educational administration. Based on previous findings, we propose that

H4 There is a significant difference in autocratic style of principal with respect to gender

H5 There is a significant difference in autocratic style of principal with respect to age

H6 There is a significant difference in autocratic style of principal with respect to education

2.3 Laissez-faire style and demographics

The Laissez-faire leadership style, which involves a leader giving subordinates a lot of freedom and autonomy in decision-making, can be influenced by other aspects, such as the gender of the leader (Chaudhry and Javed, 2012). Several research indicate that, on average, women may display communication patterns that are more interactive and inclusive. This is consistent with elements of Laissez-faire leadership, which involves leaders assigning authority and promoting autonomy (Eagly et al. 2003). Nevertheless, these inclinations can significantly differ across individuals, and there are guys who inherently demonstrate cooperative communication patterns. Experienced principals, especially those who have been in their role for a long time, may have gained trust in their team's capabilities and may feel at ease in assigning decision-making tasks to them (Yang, 2015). Their experience can enhance trust in the competence and talents of their personnel, in line with certain characteristics of a Laissez-faire leadership strategy (Wong and Giessner, 2018). Younger principals, who are likely more familiar and at ease with swift advancements in technology and educational methods, may exhibit greater flexibility and receptiveness towards novel concepts. Their leadership style may exhibit adaptability, encompassing a laissez-faire approach that fosters flexibility and innovation (Tosunoglu and Ekmekci, 2016). Leadership development opportunities may vary in terms of their availability and characteristics among different

generations. Younger principals may have been exposed to a greater range of modern leadership theories and training, which promotes a more inclusive and cooperative style to leadership (Tiwari, 2021). Senior principals may depend on conventional training, maybe conforming to a more hands-off approach. The educational background and training of a principal can affect their leadership philosophies and methods, hence influencing their adoption of the Laissez-faire leadership style (Furtner et al., 2013). Principals with formal education in school leadership or administration may have received training that focuses on different leadership styles, such as Laissez-faire. Based on previous findings, we propose that

H7 There is a significant difference in Laissez-faire style of principal with respect to gender

H8 There is a significant difference in Laissez-faire style of principal with respect to age

H9 There is a significant difference in Laissez-faire style of principal with respect to education

3. Research methodology

3.1 Data and sampling technique

This study employed a survey method and developed a questionnaire based on a literature review to test the proposed hypotheses. Principals from K12 schools located in Delhi/NCR region were selected using a convenience sampling method. Out of 500 contacted, 337 valid responses were obtained from the principals. All measurements were taken using a five-point Likert scale, and the demographics of the selected principals are presented in Table 1. Inferential analysis like t-test and ANOVA were used to analyse the collected data and test the hypotheses formulated. The study's results were interpreted based on prior literature support.

3.2 Measured variables and scales

The instrument was developed by adopting scales from literature. Scale to measure democratic style was adopted from Tiwari (2021). The sample item include "Communication moves freely, horizontally, vertically and laterally". Scale to measure autocratic style was adopted from Tiwari (2021). The sample item include "Principal determines all the activities to be done by teachers". Scale to measure Laissez-faire style was adopted from Tiwari (2021). The sample item include "The principal always tries to get teachers' ideas and opinions and make constructive decision.". The reliability of split half and Cronbach alpha coefficients for the scale was found to be 0.79 and 0.82, respectively.

Table 1. Demographic summary

Variable	Frequency (%)
<i>Gender (n=337)</i>	
Male	149(44.2)
Female	188(55.8)
<i>Age (n=337)</i>	
30-35	141(41.8)
35-40	118(35.0)
Above 40 years	78(23.1)
<i>Qualification (n=337)</i>	
Graduate	189(56.0)

3.3 Method of analysis

The next step is to empirically test the proposed hypotheses which was analysed by using t-test and ANOVA.

4. Results and discussion

4.1 Difference in democratic, autocratic style and Laissez-faire style of principal with respect to gender

From the table 2, it is cleared that the *t*-value between male and female principals with respect to democratic style is 33.313 is significant at significance level of 0.05. Therefore, there is a significant difference in different styles of principals with regard to gender. Whereas the mean value of democratic style with respect to male is $M=1.60$, $SD=0.968$ and with respect to female is $M=2.44$, $SD=1.081$. Hence, female principals prefer democratic style.

Table 2. Descriptive statistics and t-test for different styles with regard to gender

	Gender	N	Mean	Std. Deviation	t-value	p-value
Democratic	Male	149	1.60	0.968	33.312	0.002
	Female	188	2.44	1.081		
Autocratic style	Male	149	1.67	1.213	14.098	0.082
	Female	188	2.92	1.251		
Laissez-faire	Male	149	1.83	1.147	13.437	0.891
	Female	188	1.81	1.142		

From the table 2, it is cleared that the *t*-value between male and female principals with respect to autocratic style is 14.098 is non-significant at significance level of 0.05. Therefore, there is no significant difference in autocratic styles of principals with regard to gender. From the table 2, it is also cleared that the *t*-value between male and female principals with respect to laissez-faire style is 13.437 is non-significant at significance level of 0.05. Therefore, there is no significant difference in laissez-faire style of principals with regard to gender.

4.2 Difference in democratic, autocratic style and Laissez-faire style of principal with respect to age

For the Democratic leadership style, the F-statistic is 33.313 with a very low p-value (0.000), indicating that there are significant differences in the dependent variable among the Democratic leadership groups. Similarly, for the Autocratic styles, the F-statistics are 30.352 with very low p-values (both less than 0.05), suggesting significant differences in the dependent variable among these leadership styles. For Laissez-faire leadership styles, the F-statistic was found to be non-significant. The F-values and low p-values in democratic and autocratic styles suggest that there are significant differences in the means of the dependent variable across these leadership styles (see table 3).

Table 3. ANOVA for different styles with regard to age

		Sum of Squares	df	Mean Square	F	Sig.
Democratic	Between Groups	137.81	2	34.452	33.313	0.000

	Within Groups	343.353	334	1.034		
	Total	481.163	336			
Autocratic style	Between Groups	111.798	2	27.949	30.352	0.020
	Within Groups	305.722	334	0.921		
	Total	417.519	336			
Laissez-faire	Between Groups	110.047	2	27.512	19.716	0.231
	Within Groups	235.918	334	0.711		
	Total	345.964	336			

4.3 Difference in democratic, autocratic style and Laissez-faire style of principal with respect to education

For the Democratic leadership style, the F-statistic is 37.109 with a very low p-value (0.000), indicating that there are significant differences in the dependent variable among the Democratic leadership groups. For the Autocratic and Laissez-faire leadership styles, the F-statistics are 12.844 and 14.509, respectively, with high p-values (greater than 0.05), suggesting non-significant differences in the dependent variable among these leadership styles (see table 3).

Table 3. ANOVA for different styles with regard to Education

		Sum of Squares	df	Mean Square	F	Sig.
Democratic	Between Groups	110.884	1	27.721	37.109	0.000
	Within Groups	248.006	335	0.747		
	Total	358.89	336			
Autocratic style	Between Groups	120.833	1	30.208	12.844	0.125
	Within Groups	234.087	335	0.705		
	Total	354.92	336			
Laissez-faire	Between Groups	140.157	1	35.039	14.509	0.092
	Within Groups	261.362	335	0.787		
	Total	401.519	336			

5. Discussion and conclusion

The study's findings provide strong evidence of statistically significant variations in the dependent variable across persons who display democratic, autocratic, and laissez-faire leadership styles, with a particular emphasis on gender, age and education as distinguishing features. The results offer useful insights into the leadership styles across gender dynamics. The observed disparities might be ascribed to several reasons, such as divergent communication styles, decision-making procedures, and the level of autonomy bestowed within each leadership approach. An analysis of leadership styles, specifically Democratic, Autocratic, and Laissez-faire, provides a valuable investigation into the dynamics affected by age in a varied organizational setting. The study found that age had a substantial impact on leadership styles, with statistically significant differences observed in the democratic, autocratic, and laissez-faire approaches among different age groups. The observed variations in leadership styles attributed to age may be influenced by a multitude of factors. The observed discrepancies may be attributed to generational disparities in experiences, technological familiarity, and attitudes toward authority. Comprehending the interplay of leadership styles across education, it is essential for businesses aiming to adjust their leadership development plans to accommodate the changing dynamics of a workforce consisting of multiple generations.

The statistically significant difference in preferences for the democratic leadership style between males and females suggests that gender plays a substantial role in shaping leadership preferences. The higher inclination of females towards the democratic style could be attributed to various factors, including communication styles, collaboration preferences, and a tendency towards inclusive decision-making processes. This finding has practical implications for organizations aiming to foster diverse and inclusive leadership styles. It emphasizes the importance of recognizing and accommodating gender-specific leadership preferences to create more effective and equitable leadership structures.

The analysis suggests that there are notable variations in leadership style preferences among different age groups. For Democratic and Autocratic leadership styles, there are significant differences, implying diverse inclinations within these categories. These findings highlight the importance for organizations to acknowledge and adapt to the varying preferences for participative or directive leadership. However, for Laissez-faire leadership, observed differences between age groups may be attributed to chance rather than meaningful distinctions. Overall, the study provides valuable insights into the nuanced landscape of leadership style preferences, emphasizing the importance of tailored approaches in organizational leadership development.

The analysis of leadership style preferences in relation to varying levels of education yields noteworthy findings. Specifically, there is a statistically significant divergence in preferences for democratic leadership across educational backgrounds, indicating substantial variability in inclination toward participative leadership among individuals with different levels of education. However, the observed distinctions in preferences for autocratic and laissez-faire leadership styles based on education levels, while apparent, do not attain statistical significance. This implies that educational backgrounds may not exert a statistically significant influence on preferences for more directive or hands-off leadership approaches. Caution is advised in the interpretation of these results, and a nuanced understanding may be achieved through further exploration, considering contextual factors that may impact the interplay between education and leadership style preferences.

6. Limitations and roadmap for future research

Interesting findings in this paper have come up with some limitations which should be taken into consideration. First, sample data collected from Delhi/NCR is less for the generalization of results to represent the entire population of India. So, future studies can take a large sample size. Second, the respondents belong to Delhi/NCR participated in the survey, and future studies can recruit participants from other geographic locations also. Third, current study consider democratic, autocratic, and laissez-faire leadership styles of principals. Thus, future studies can also consider other leadership styles.

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