

AN EMPIRICAL ANALYSIS OF ROLE OF LEADERSHIP CHARACTERISTICS IN RURAL SCHOOL PERFORMANCE

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ABSTRACT

Leadership style has profound effect on school performance and academic outcomes. The current study was aimed at identifying, analyzing, and evaluating role and type of leadership as a major determinant of school performance in four rural sectors of Islamabad. A total of 83 primary and secondary rural schools out of a total population of 275 schools were selected through multiple stage sampling technique. Semi structured questionnaire was administered from respective heads and data was analyzed using descriptive statistics and multiple regression models. The results varied for both primary and secondary schools. The results of the study showed that most of the heads in primary schools adopted democratic type of leadership and results were found to be significant in primary schools' performance; while transformational type of leadership was found effective in secondary schools' performance. The study recommends that bottom up and inclusive approach is essential for formulating education policies and implementation in rural areas and leadership trainings need to be customized according to school needs. Transformational leadership style proved effective in secondary schools. School heads need consistent leadership trainings to further build their capacities.

Keywords: Leadership, Rural Area, School Performance, Regression Analysis,

INTRODUCTION

Leadership plays the central role in school performance by creating an enabling learning environment, mentoring and guiding teachers for better educational outcomes. A dynamic leader navigates the school ship successfully to achieve desired goals. Leadership style has profound effect on academic outcomes and builds teachers' capacity and teaching quality. School head provides guidance and set targets to achieve desired objectives (Jacobson, 2011). According to Leithwood and Riehl (2003), "Scratch the surface of an excellent school and you are likely to find an excellent principal. Peer into a failing school, and you will find weak leadership".

Multiple factors define role of school head in rural areas. These nature of the community, prevailing norms, values and customs, grade levels (early, middle, high school) and support of local community. Leadership plays a pivotal role in overall school performance by creating an enabling learning

environment and guiding teachers for better educational outcomes. Leadership has had a profound impact on academic outcomes throughout the years effecting teachers and teaching quality. School head provides guidance and set targets to achieve desired objectives (Jacobson, 2011). Quality leaders motivate teachers and create better working relationship for improved outcomes (Spillane et al., 2007). Leadership offers a unifying focus, assembles a result-oriented faculty and makes pedagogy and learning focal points around which everything revolves. Impressionistic and sustainable students learning occur in schools with competent school leaders (Deal and Peterson, 1998).

The role of school head is more dynamic and challenging in rural context facing unique working relationships, specific needs for professional development and more importantly dealing with parents and rural community (Browne and Allen, 2006). The rural education paradigm also requires

dynamic, innovative and educated leaders who guide and lead their people to fight against poverty and obsolete ideas. Educated rural leaders foresee the future development needs of their locale and resultantly play a proactive role in rural development (Martin, 1984).

The role of a school leader entails leadership knowledge and leadership skills (Renihan and Noonan, 2012). Principals make a difference as regards improving teaching and learning process. The key determinants for school leadership revolve around school planning and decision making, professional development, and nurturing professional collaboration to improve student achievement.

Research work carried out by different authors in different countries has revealed that leadership has profound and deep impact on school performance and improvement. Leadership style plays a major role in determining school head's effectiveness and performance in a particular school. The current study explored role of transformational and democratic leadership viz-a-viz school performance in primary and secondary schools in four rural areas of Islamabad. Democratic leadership style entails distributing responsibility among the members, aiding the group's decision-making process, gathering input from staff and taking informed decision (Gastil, 1994). Transformational leadership entails providing individual support, rolling out a vision for school, inspiring staff to achieve targets, offering intellectual stimulation and taking initiatives. Democratic school leaders involve faculty in constructive discourse regarding social, academic and administrative issues and broad participation takes place rather than giving top down instructions (Leithwood, 1995). Leadership styles whether democratic or transformational impact students' outcomes and school results. Competence and management skills of heads play major role in school performance (Sawati et al., 2013). Leadership style adopted by head develops a culture conducive for learning and capacity enhancement. Each school has peculiar culture and unique structure mainly shaped by school leadership (Leithwood and Riehl, 2003). Democratic leaders get input and suggestions of teachers and work in a consultative manner. Transformational school heads also focus on their own professional development as well as of their staff and instill motivation in staff. School heads eliciting participation of staff in school affairs and

ensuring productive engagement results in improved school performance.

The study aims at exploring comparative role of both democratic and transformational leadership styles in performance of primary and secondary schools. The results of the study will enable strategists, policy makers in making informed decisions and chalking out pragmatic policies and programmes to acquire better desired outcomes. It will also be helpful for principals and administrators in taking course correction measures and adjusting leadership approaches. The general objective of the study was to identify, analyze, and evaluate democratic and transformational leadership attributes as major determinants of school performance. Specific objective of the study was to assess the role of leadership attributes in rural school performance in the research area. Most of the literature elaborates the fact that leadership attributes have deep and impressionistic influence on school performance. The role of leadership essentially determines the progress and outcomes in any educational institution and has an overarching effect. School leadership unifies all stakeholders, provides a stimulus to strive toward school goals, and develops a locus for rational decision making.

The literature highlights diverse role of a school head in social, academic and administrative domains. A strong school leader in rural areas plays an effective role in school improvement and performance. School heads build capacities of teachers and devolve responsibilities accordingly. They successfully get teachers involved in processes and execution of policies. School leader develops collective vision and determines outputs, outcomes and impact. Democratic leadership induces positive results and improves school performance. Transformational management in rural settings has a very positive effect on school performance as it is more result-oriented. Successful leaders facilitate a shift from hierarchical to professional authority to achieve desired objectives.

Caldwell and Spinks (1988) argued that school leader should pursue a vision collectively along with his teachers and plan activities, outputs, outcomes and impacts accordingly. Just developing a vision will do no wonders and all stakeholders should be taken on board to translate the vision into reality. All the activities should revolve around the vision and concerted efforts should be made to attain set targets.

Bolman (1993) emphasized that democratic leadership in which teachers are regularly consulted and their constructive feedback is valued contributed significantly to students' outcomes. Teachers are consulted on different academic and administrative issues and a collective strategy is chalked out to rectify shortcomings and introduce innovations for improvement.

Hopkins (2001) posited that transformational and instructional leadership practices are instrumental in attaining school improvement particularly in hard and challenging circumstances. Heads displaying transformational leadership qualities are more productive and result oriented when faced with tough situations. The transition from hierarchical authority (power centric) to professional authority (inclusiveness cum pedagogic excellence) is of prime importance.

Leithwood (1995) posited that school heads adopting transformational leadership styles effectively contributes towards school performance. He further concluded transformational leadership practices should be part of heads' training programmes. Transformational leadership considerably promotes new learning, setting norms, creating new ideas and sense of ownership by school staff and management. The school heads shares a vision and activities are pragmatically distributed amongst potential staff so that a process of continuous professional development goes on.

Louis et al., (1996) concluded that school leaders showing better academic results of their schools frequently interacted with teachers to stimulate professional discourse and deliberated upon common issues, new ideas and best pedagogical techniques. This also helped in building cohesion amongst staff members and created a conducive learning environment.

Mortimore (2000) highlighted that effective school heads have the capacity, will and strategy to control and steer the school towards achieving intended reforms and improve students' achievements. He elaborated that efficient and professional school heads considerably improve schools' academic performance through multiple activities at different levels including students, teachers and school environment.

Fullan (2001) concluded that quality of leadership determines motivation of teachers and pedagogy, which subsequently improves student

performance. In a school set up, traditionally, leadership was viewed as individualistic and non-systemic perspectives that reinforced a focus on short-term activities and a sort of charismatic leader.

Kenneth Leithwood provides the early pioneering empirical research on transformational leadership styles in school settings. He suggests that transformational leadership positively influences schools' leadership's ability to facilitate change in school restructuring initiatives, and is best suited for coping with the demands of schools in twenty-first century. International Social Science Review, Vol. 93, Iss. 1, Art, 4 <http://digitalcommons.northgeorgia.edu/issr/vol93/iss1/4>. Leithwood postulates that transformational leadership styles promise to enhance school leadership's ability to make the necessary school transformations that facilitate meeting stakeholder accountability and performance improvement demands. Leithwood recommends transformational leadership approaches be practiced and featured as components of principal preparation programs. Keith Leithwood, "Leadership for School Restructuring," Education Administration Quarterly 48, no. 3 (1994): 499. 18 Ibid, 499-503. The notion of transformational leadership being applied in schools in the last decade grew out of the proven success of transformational leadership style in business organizations; and research studies in education reporting positive correlations between follower/subordinate learning in educational settings, and follower/ subordinate learning and performance in business organizations. As previously stated, schools face ever-increasing scrutiny and accountability relative to student outcomes and school improvement, Hence, transformational leadership is appropriate for school settings because of its emphasis on preparing employees to learn new things, building and strengthening new organizational norms, establishing new meaning and ways of thinking, and its effectiveness as a tool in helping leaders break established norms and establish new norms that transform school culture.

Leithwood and Riehl (2003) posited that leadership plays a pivotal role in facilitating learning environment with far reaching impacts on students' learning through a multi-pronged strategy involving

teachers, students and also taking feedback and support from local community. They also maintained that an ideal school leader should have a repertoire of administrative and social skills to choose from in any given situation. He should be well equipped and well versed with requisites to deliver and perform effectively. He should have a multi-dimensional personality to deal and cope with issues of diverse nature.

Spillane and Camburn (2007) concluded that school leadership of late has been instrumental in creating a collective construct that can be distributed among teachers for purposes of cultivating favorable working relationships for better outcomes.

Jacobson (2011) found that school and leadership effects are shown to influence changes in academic outcomes via their effects on teachers and teaching quality. Good leadership fosters a favorable school climate and culture that emphasizes high academic standards.

Sun and Leithwood (2012) opined that one of the indirect influences of transformational leadership is that effective collaboration between school staff and management develops a model wherein it is established that shared governance mechanism in schools produce better results.

Werang and Loupatty (2016) concluded that school heads adopting and exercising transformational leadership style had significant effect on school climate and teachers' morale which contributed towards school improvement. Therefore, based on the literature review, the following hypothesis is developed.

H1: There is a significant and positive impact of the leadership type on school performance.

Data and Empirical Methodology

All schools located in rural Islamabad constituted the universe of this study. Overall there are 275 public rural schools in Islamabad. A geo referenced map of the research area is provided in Fig.4.1.

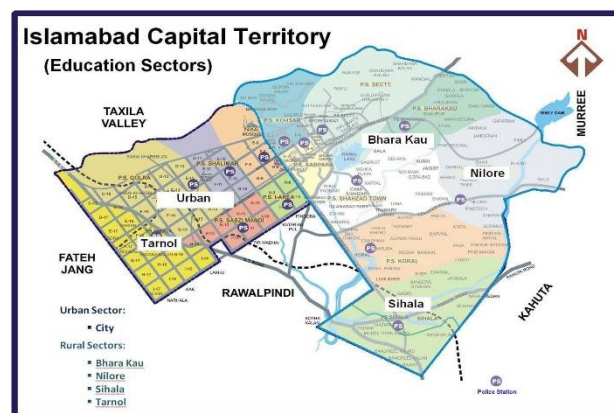


Fig. 4.1: Map of Islamabad Capital Territory

The map shows four rural sectors of Islamabad Capital Territory namely, Nilore, Tarnol, Bhara Kau and Sihala sectors. There are 67 schools in Nilore, 55 schools in Tarnol, 79 schools in Bhara Kau, and 74 schools in Sihala. All these schools are further classified as primary schools and secondary schools (Table 4.1). Rural sectors of Islamabad are quite diverse as regards geographical location, distance and altitude. The population is also diverse as people from all over the country reside in Islamabad for jobs and businesses. To get a representative sample, 30% schools were selected from the research area. Multiple stage sampling technique was used to select the sample.

In the first stage, proportionate sampling technique (Cochran, 1977) was used to select 83 schools from 275 schools using the following formula:

$$n_i = \frac{N_i}{N} n \quad (1)$$

Where

N = Total number of schools in the research area

N_i = Total number of schools in each sector

n = Total number of sampled schools in the research area

n_i = total number of sampled schools in each sector

Table 3.1 Sample Selection and its Procedure

Sector	Primary schools	Sub-samples	Secondary schools	Sub-samples	Total schools	Total sample size
Nilore	45	13	22	7	67	20
Bhara Kau	47	14	32	10	79	24
Tarnual	35	11	20	6	55	17
Sihala	53	16	21	6	74	22
Total	180	54	95	29	275	83

Source: Survey, 2019

In the second stage, all the schools were divided into two strata on the basis of conduct of exams by Federal Board of Intermediate and Secondary Education (FBISE) Islamabad, viz-a-viz, primary and secondary schools. A proportionate sample was selected from both strata using the above mentioned formula of proportional allocation. Thus a total of 54 primary and 29 secondary schools were selected as sample. Details of the number of schools selected from each stratum are given in table 3.1. Data were collected using questionnaire. Data were collected from schools during 2019. The five years' academic results of schools in rural sectors spanned from 2015 to 2019. The data were analyzed by using descriptive analysis as well as regression analysis. The problems related to rural education was ascertained by using descriptive statistics. Besides, multiple regression analysis was used to determine the role of leadership in school performance.

Econometric Model and its specification

The functional relationship between dependent and explanatory variables is shown as:

$$Y = f(LD, QUA, EXP, G) \quad (2)$$

Where, Y is school performance, LD is leadership style in primary and secondary schools, QUA is qualification of school heads, EXP is experience of school heads and G is gender.

To estimate performance of primary and secondary schools separately, two models were used given below as:

(i) Regression model for primary schools:

$$Y_{pi} = \alpha + \beta_1 X_1 + \beta_2 X_2 + \theta_1 D_1 + \theta_2 D_2 + \mu_i \quad (3)$$

Where

Y_{pi} = Performance of the i th primary school measured as the average passing percentage of the students during the last five years;

X_1 = Qualification of the school head measured as level of education;

X_2 = Experience of the school head measured as years of experience as school head (categories);

D_1 = Dummy for leadership style (= 1 if democratic and 0 if transformational);

D_2 = Dummy for gender of school head (= 1 if male and 0 if female);

α = constant of the model

β_i = regression coefficients

μ_i = Error term

(ii) Regression model for secondary schools:

$$Y_{si} = \alpha + \beta_1 X_1 + \beta_2 X_2 + \theta_1 D_1 + \theta_2 D_2 + \mu_i \quad (4)$$

Where,

Y_{si} = Performance of the i th secondary school measured as the average passing percentage of the students during the last five years;

X_1 = Qualification of the school head measured as level of education;

X_2 = Experience of the school head measured as years of experience as school head (categories);

D_1 = Dummy for leadership style (= 1 if democratic and 0 if transformational);

D_2 = Dummy for gender of school head (= 1 if male and 0 if female);

D_1 = Dummy for leadership style (= 1 if democratic and 0 if transformational);

θ = constants of the model

γ = regression coefficients

μ_i = Error term

The dependent variable in the model is school performance (Y). The independent variables are leadership style. *School performance (SP)* is defined as the improved efficiency and better outcomes in terms of administrative and academic aspects.

School performance was measured as average passing percentage of students in class 5th and 10th respectively during five years period of 2015 to 2019.

Qualification (QUA) of the school head was a potential explanatory variable affecting school performance. QUA of head was measured as the number of years of formal education of the school head and also segregated as Intermediate, Graduation, Masters and PhD. It was also hypothesized that qualification of school head has positive influence on school performance.

Experience (EXP) of the school head is also an important variable in terms of school performance. EXP was measured as the number of years of experience as a school head and was categorized in the two categories measured as 1 if more than 10 years and 0 if less than 10 years. Experience was hypothesized as a variable which could positively or negatively influence school performance.

Gender (G) of the school head is also perceived as a potential explanatory variable. This variable was used to quantify the possible effects of gender of the school head on school performance. The variable was used in dummy form where 1 is equal to male and 0 if female. Gender was

hypothesized as either positively or negatively affecting school performance.

Leadership (LD) style entails democratic or other leadership styles which invariably affects rural school performance. Leadership style reflects whether it is democratic or transformational. LD was used in binary form and was measured as 1 if democratic and 0 if transformational. Leadership was also hypothesized as a variable which either has positive or negative effect on school performance.

Results and Discussion

Table 4.1 shows demographic statistic of the respondents. Distribution of sample respondents on the basis of gender, qualification, and experience is highlighted. The table shows respective numbers, percentages and characteristics of variables. Leadership style plays a major role in determining school head effectiveness and performance in a particular school. The current study explored role of transformational and democratic leadership viz-a-viz school performance.

Fig. 4.1 shows that 63 percent of the sampled respondents in primary schools adopted democratic type of leadership while 37 percent of heads adopted transformational leadership.

Table 4.1 Demographic Statistic of Sample Respondents

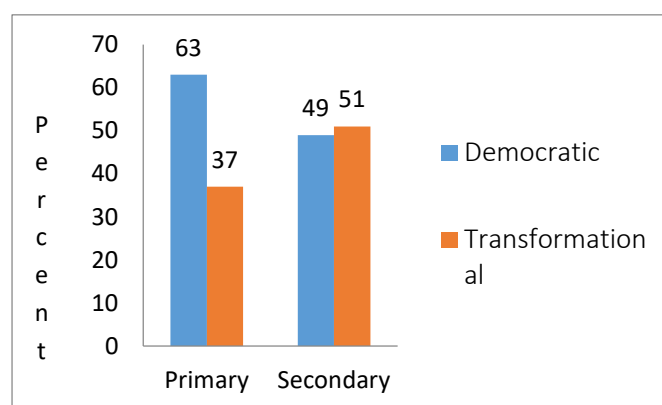
Variables	Characteristics	N	%age	Variables	Characteristics	N	%age
Primary				Secondary			
Gender	Male	25	46	Gender	Male	12	41
	Female	29	54		Female	17	59
Qualification	Intermediate	6	11	Qualification	Intermediate	0	0
	Graduation	10	19		Graduation	10	17
	Master	34	63		Master	17	76
	MPhil/PhD	4	7		MPhil/PhD	2	7
Experience	Above 10 years	40	26	Experience	Above 10 years	19	65
	Below 10 years	14	74		Below 10 years	10	35

Source: Survey, 2019

It has been observed that majority of the heads adopted democratic type of leadership in primary

schools as compared with transformational leadership.

Fig. 4.1 Distribution of Respondents on the basis of Type of Leadership



As regards secondary schools, it was observed that 49 percent heads adopted democratic leadership style in secondary schools while 51 percent of respondents adopted transformational style of leadership. As highlighted in the figure there had been a marked increase in adoption of

transformational leadership style in case of secondary schools.

Leadership styles adopted by school heads also have an impact on school performance to varying degrees. Different researchers have postulated different results regarding leadership style adopted by school heads. Leadership was taken as an important explanatory variable. Leadership style adopted by a school head is instrumental in school performance. Different heads adopt different type of leadership either partially or fully. In the current study transformational and democratic leadership styles were analyzed in primary and secondary schools. Table 5.2 shows results for multiple linear regression for performance of primary schools. The coefficient of democratic leadership in primary school was 8.30. The coefficient of democratic leadership is positive which shows that there had been positive relationship between democratic leadership and school performance.

Table 4.2: Estimated Coefficients of Multiple Linear Regression for Performance of Primary Schools

Explanatory Variables	β	Std. Error	t-value	Sig
Qualification				
Graduation	12.4652	3.213244	3.88	0.000
Master	16.02519	3.1892	5.02	0.000
MPhil and PhD	15.12464	4.2308	3.57	0.001
Experience				
Above 10 years=1, below 10 years =0	2.097648	1.782913	1.18	0.246
Gender				
(male=1,female =0)	0.3124243	1.366897	0.23	0.820
Leadership				
Democratic =1, Transformational = 0)	8.302193	1.867857	4.44	0.000
$R^2= 0.88826$		$F= 36.76$		$P\text{-value} = 0.000$

Source: Survey, 2019

This implies that it is more likely that school performance will improve if democratic leadership style is adopted by school heads. The p-value is 0.001 which means that democratic leadership in primary schools had highly significant effect on school performance in rural schools of Islamabad. The results are similar to findings of Bolman et al., (1993) who concluded that democratic type of leadership adopted by school heads contributed positively towards students' achievements and better results. The findings are however opposite to those of Leithwood (1995) who

reported that transformational leadership in schools has significant role in students' outcomes and school performance.

Table 4.3 shows results of multiple linear regression for performance of secondary schools. As regards secondary schools, the current results highlight coefficient of democratic leadership as -5.20 in secondary schools. The coefficient of democratic leadership is negative which shows that there had been negative relationship between democratic leadership and secondary school performance. It further implies that an increase of each school head having democratic style of

leadership decreased school performance by 5.20 as compared with school heads having transformational style of leadership in secondary schools.

Table 4.3: Estimated Coefficients of Multiple Linear Regression for Performance of Secondary Schools

Explanatory Variables	B	Std. Error	t-value	Sig
Qualification				
Master	4.29913	2.73073	0.86	0.131
MPhil and PhD	3.6654	4.2637	0.95	0.400
Gender (male=1, female =0)	-3.04015	2.49877	-1.22	0.238
Leadership Democratic =1, Transformational = 0)	-5.208	1.91810	-2.72	0.013
Constant	32.19108	4.39918	7.32	0.000
R ² = 0.8930 F = 20.87 P-value = 0.000				

Source: Survey 2019

On the other hand transformational leadership would increase school performance by 5.20 as shown in the table. The significance value was less than 0.05, which means that leadership style had significant effect on school performance in secondary rural schools of Islamabad. The results are opposite to findings of Chepkonga et al., (2015) in which they found that school heads manifesting democratic leadership style perform better in terms of academic results. The findings are similar to those of Leithwood (1995) who concluded that transformational leadership in schools has significant role in students' outcomes, accountability and school performance. The results also reaffirm conclusions drawn by Valentine and Prater (2011) and Ali (2016) that schools heads showing transformational leadership in institutions get better results and academic performance.

school as compared with those who opted for democratic style of leadership. It was also revealed that democratic style of leadership had negative relationship with school performance at secondary level and transformational leadership was found to be more effective at secondary level. Heads in primary schools proactively and regularly engaged with staff to get their input in decision making. Consultation and brainstorming with staff highlighted democratic feature of heads at primary level. As regards secondary schools, heads inspired, sensitized and motivated teachers to take desired actions. Setting a vision, inspiration and motivation were key attributes of transformational leadership approach in secondary schools in rural areas of Islamabad. The study thus showed that leadership attributes varied in primary and secondary schools in rural areas of Islamabad.

Conclusion

Leadership variable presented different scenarios in primary and secondary schools' performance. The effect of democratic and transformational leadership varied for primary and secondary levels. It was observed that majority of the heads adopted democratic leadership style in primary schools and results showed that democratic leadership style had significant effect on school performance at primary level. Results also unfolded that a thin majority of schools heads adopted transformational style of leadership in secondary

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