

http://www.eab.org.tr

Educational Research Association The International Journal of Educational Researchers 2020, 11(2): 30-40 ISSN: 1308-9501



http://ijer.eab.org.tr

Effectiveness of Spontaneous Collaboration as a form of Distributed Leadership in School Performance

Touseef Fatima¹

Abstract

Distributed leadership involves people sharing their expertise to get greater output and is observed in any organization by spontaneous collaboration, intuitive working relations and institutionalized practice. Research has identified the role of spontaneous collaboration on multiple school performance such as rate of enrollment, rate of retention and rate of graduation. However, relatively few is known in Pakistan about role of spontaneous collaboration especially in students' academic achievement in Mathematics. The present study examined the effectiveness of spontaneous collaboration as a form of distributed leadership in school performance. The quantitative design was found compatible as hypothesis were derived from Peter Gronn's distributed leadership. The schools where students give their matriculation exam through Board of Secondary Education Karachi (BSEK) were population (N=9887). The 370 participants through systematic sampling were selected and responded through an adapted questionnaire that included 39-items reflecting their responses on school performance, instructional strategy and role of leadership with the consideration of Mathematics. The study explained the relationship between school performance as measured by Mathematics results in Board of Secondary Education (SSC-II) Examination and spontaneous collaboration through the computation of Pearson product-moment correlation coefficient. The findings of the study indicated that positive and significant relationship found between acceptance of change and school performance. Moreover, the culture of autonomy proved to have significant relationship with school performance. However, the negative while significant relationship existed between trust in the expertise of individual and school performance. Thus, the study shed light on certain aspects of spontaneous collaboration that were found significant with the school performance.

Keywords: Distributed leadership-Spontaneous collaboration-School performance

Received:01 February 2020 Accepted:17 April 2020 Publish:30 June 2020

¹ Lecturer, Szabist - Education, Pakistan

Correspondence: touseeffatima15@gmail.com

Introduction

It is considered that the principals lead the school to greatness (Clifford, 2012). Traditionally, they are on the top position of the school and assign tasks and monitor and evaluate the tasks. They do not provide autonomy to the teachers to accomplish the tasks. They want that their teacher must follow the process as it is said. They do not accept changes proceed from their subordinates (Skiba, 2006). Similarly, some principals are novice and involve their subordinates in decision making therefore, the voice of favoritism is echoed. However, it is observed that some principals are of democratic perspective and some principals employ autocratic style to deal day to day situation of schools (Fabelo, 2011). Neither of them is assumed significant in promoting literacy and school improvement. There is need of amalgam of both which must come under single banner (Bush, 2013). The educators executed a distributed perspective of leadership (Spillane J., 2006).

The present study observed the effectiveness of distributed leadership in school performance. It provided a guideline to novice principal of the school to accompany the characteristics distributed leadership. It would bring a positive culture in the mind of the educational leader and enable them to communicate cooperation and sense of integrity empirically. It would boost the confidence of those who want to stand out from stereotype characteristics of leadership.

In order to meet the vision 2025, Pakistan needs some dynamic leaders in education to promote literacy and achieve 100% literacy rate among youth by 2030 (National Education Policy, 2017). The policy has been demanded that the principals of the schools improve students' enrollment and students' achievement. The principal has to manage day to day tasks and also set certain visions which inculcate National Education Policy, 2017.

Conceptual Framework of the study

The conceptual framework of the study was based on spontaneous collaboration emerged from acceptance of change, culture of autonomy and trust in the expertise of the individuals as independent variable. While Mathematics results in Board of Secondary Education (SSC-II) Examination was the dependent variable. The conceptual framework has been shown in figure -1.



Figure-1. Conceptual Framework of the Study

The objectives would achieve within the study are as given below:

- To identify the school-level relationship between teachers' perceptions about acceptance of change and school performance as measured by Mathematics results in Board of Secondary Education (SSC-II) Examination.
- To identify the school-level relationship between teachers' perceptions about culture of autonomy and school performance as measured by Mathematics results in Board of Secondary Education (SSC-II) Examination.

Effectiveness of Spontaneous Collaboration as a form of Distributed Leadership in School Performance

• To identify the school-level relationship between teachers' perceptions of trust in the expertise of individuals and school performance as measured by Mathematics results in Board of Secondary Education (SSC-II) Examination.

Academic Relevance

Being the part of under developed nation, each stakeholder of education system has been confronted of many challenges. The stakeholder of education system undertakes several strategies to transform the challenges into opportunities (Rastegarpour, 2010). Furthermore, they need a professional climate that enables the education system to grow as well as deliver cent percent output to the stakeholders (Leithwood K. D., 2006a). Moreover, in order tomeet the vision 2025, the interaction between principal and follower would be highly appreciated.

The characteristics of the distributed leadership provide a path to share views frequently and informally, that is required to sort the issues of school enrollment and improvement (Rastegarpour, 2010). The school community has to communicate each other in the way that there is a culture of understanding, sense of integrity and cooperation (Neumerski, 2012). Furthermore, the fore-mentioned culture smoothen the process of learning of students and teachers too. The tasks of the school enrollment and improvement need the dimensions of distributed leadership that are comprised of principal and teacher leadership, organization and management of school activities including school culture, monitoring, assessment and artifacts of the school. The characteristics of distributed leadership are spontaneous collaboration, intuitive working relations and institutionalized practices (Davis, 2009).

Literature Review

The present study was grounded on the theories of 'distributed cognition' and 'social learning theory'. Distributed cognition indicates human cognition and knowledge are closely associated with the objects, individuals, artifacts, and tools of the environment (Hutchins, 1995). The aim of distributed cognition is how distributed units coordinate each other and activity takes place (Hutchins, 1995). While social learning theory implies how human activity is both empowered and pressurized by individual, material, cultural and social factors (Bandura, 1977). The theory explains human behavior with relevance to continuous interchangeable contact of cognitive, behavioral, and environmental influences (Bandura, 1977). These two theories provided base for distributed leadership as defined by James Spillane and Peter Gronn.

In the eyes of James Spillane (Spillane J., 2007a)distributed leadership is considered as a result of interaction among school personnel, their usage of school artifacts and their situation. Thus Spillane perception of distributed leadership is based on "the leader plus aspect and the practice aspect" (Spillane J., 2007a). The leader plus aspect recognizes the work of every individual of school not regard to the position and the practice aspect leads to the product of the interactions of school leaders, followers, and aspects of their situation rather than the structure, function and role of leadership.

Similarly, according to Gronn's distributed leadership, the totality of the task and the technological capability are used for the completion of the task of the worker (Gronn, 2002). He (Gronn, 2010)elaborated the concept of distributed leadership by "concertive action," that means people are working in an organization to share their expertise in order to get greater output.

According to Gronn's distributed leadership there is a switch from heroics to distribution (Gronn, 2002). He indicated that distributed leadership concentrates on engaging expertise wherever it exists within the organization. He outlined three forms of concretive action that can be observed in the practice of distributed leadership. However, the present study is based on spontaneous collaboration that is based on acceptance of change, culture of autonomy and trust in the expertise of the individuals.

The distributed leadership has been examined through several quantitative researches. A study revealed that principals' perceived distributed and instructional leadership practices as significant predictors of staff mutual respect in the school (Liu, 2018). It is assumed that principal is the one who

enables the school environment cooperative in nature while the role of controlling the negative impulse are not found in the study.

Another study demonstrated envision of new role of principal. The study has identified the levels of distributed leadership (DL) practices through teachers' perceptions along with the indicators of school effectiveness (SE) in Egypt and Oman. The findings of the study shown distributed leadership (DL) plays positive and significant role in school effectiveness with respect to quality education system and improved students' achievements(SE). The study also provides the view that the accreditation process of school is a way to improve distributed leadership (DL) in schools and also to increase the indicators of school effectiveness (SE) (Al-Mahdy, 2017). It seems that school accreditation enables the principals to incorporate those attributes which makes them and their school accepted.

Similarly, specifically in Pakistan where inadequacy of resources are witnessed, a study indicated that head-teachers accompanies distributed leadership and meet the expectation of stakeholders by improving teaching and learning and improving school infrastructure (Khaki, 2014). In addition to this, another study has emphasized upon teacher-principal relations as an important factor for school effectiveness and student outcomes (Muhammad Niqab, 2014).

The gap in the study on distributed leadership and school performance in Pakistan were provided to design the study. Hence, on the basis of above discussion the present study will employ quantitative methodology and will seek to determine the effectiveness of distributed leadership in school performance.

Methodology

Research Design

The present study employed quantitative approach. As quantitative approach test the hypotheses. The study investigated whether and to what level, a relationship between two quantifiable variables exist (Gay, 1996). The survey was used to collect data. The population of the study was the schools where students give their matriculation exam through Board of Secondary Education Karachi (BSEK). The schools were located in different towns of Karachi and their students are enrolled in Board of Secondary Education Karachi (BSEK). The total number of school in all towns of Karachi was comprised of 9887. Thus, the population of study consists of 9887 schools. Systematic sampling was employed to gather data from the sample. Thus, the sample size was 370 at 5% margin of error and 95% confidence interval (CheckMarket, 2019). In order to get 370 samples, every 27 schools was selected from the list of the school given by Board of Secondary Education Karachi (BSEK). For triangulation of the study questionnaire was asked to fill by the mathematics teacher of secondary sections and also from primary sections.

Data Collection

Primarily, the data for the determining the effectiveness of distributed leadership was collected through questionnaire by systematic sampling. The questionnaire was adapted from Dr. Salfi'swork entitled (Salfi N. , 2011). The questionnaire had four sections namely Demographic info, School performance, Instructional strategy for Mathematics and Distributed leadership survey. Demographic info asked about age, gender, qualification, experience and post in the school. School performance asked about how school performs at Board of Secondary Education (SSC-II) examination, Instructional strategy for Mathematics investigates about how mathematics teaching was being conducted in the school and Distributed leadership survey asked about how school personnel interact in the school. The questionnaire was sent to the participants.

The questionnaire asked about several aspects of the distributed leadership. Every participant was asked to respond according to the situation which they encountered in the school related to the distributed leadership. They were asked to respond *strongly agree* if the given statement strongly met their using criteria of distributed leadership in the schools while the given statement did not strongly meet their using criteria of distributed leadership in the schools they were asked to *strongly disagree* the given statement. Similarly they were also asked to respond *agree* if the given statement met their using criteria of distributed leadership in the schools but not strongly while the given statement did not meet their using criteria of distributed leadership in the schools but not strongly while the given statement did not meet their using criteria of distributed leadership in the schools they were asked to *disagree* the given statement did not meet their using criteria of distributed leadership in the schools but not strongly while the given statement did not meet their using criteria of distributed leadership in the schools they were asked to *disagree* the given statement did not meet their using criteria of distributed leadership in the schools they were asked to *disagree* the given

statement.

On the other hand if they were unaware of the given statement met their using criteria of distributed leadership in the schools or not, they were asked to respond *undecided* to the statement. Thus, the questionnaire for the present study was close-ended and enabled the participants of the study to show their consensus to the statements.

Data Analysis

The study gathered data from mathematics teachers of different school located in different towns of Karachi. The participants of Malir were 174, 59 were from Gulshan, 50 form Orangi, 50 form Korangi while 37 were from Nazimabad were participated. The total 400 questionnaires were distributed among the participants and 370 questionnaires were gathered successfully. The geographical location is given in table 1.

Location	No. of Respondents
Malir	174
Gulshan	59
Orangi	50
Korangi	50
Nazimabad	37
Total	370

Table 1. Location of Respondents

Demographic information contains gender, age, education, experience in the same school and total teaching experience were also gathered from respondents .The study gathered responses from 137 males and 233 female respondents as shown in table 2.

Table 2. Gender of Respondents

	Gender	No. of Respondents	
Male		137	
Female		233	
Total		370	

The respondents included 211 were of 35-45 years old, whereas remaining 159 were 25-35 years old as shown in table 3.

Table 3. Age of Respondents

0	Age	No. of Respondents
35-45 years		211
25-35years		159
	Total	370

The study included 198 respondents with reference to their teaching experience in the same school were having teaching experience of 5-8 years, 85 respondents of the study were having teaching experience of 8-10 years, 50 respondents of the study were having teaching experience of 3-5 years whereas 37 respondents of the study were having teaching experience of 1-3 years as shown in table 4. **Table 4.** Teaching experience in the studied school of Respondents

	Teaching Experience in the studied school	No. of Respondents
5-8 years		198
8-10 years		85
3-5years		50
1-3 years		37
Total		370

Similarly, 137 respondents with reference to their teaching experience not in the same school were

having teaching experience of 3-6 years, 109 respondents were having teaching experience of 6-10 years, 87 respondents were having teaching experience of 10-12 years whereas 37 respondents were having teaching experience of 1-3 years as shown in table 5.

Table 5. Total Teaching experience of RespondentsTotal Teaching ExperienceNo. of Respondents3-6 years1376-10 years10910-12years871-3 years37Total

On the basis of education 209 respondents were completed their post graduate studies from Pakistan while 161 respondents were completed their graduate studies from Pakistan as shown in table 6.

Table 6. Education of Respondents

Education	No. of Respondents
Post-graduate	209
Graduate	161
Total	370

Empirical Analysis

The present study studied distributed leadership in form of spontaneous collaboration with three dimensions i.e. acceptance of change, culture of autonomy, and trust in the expertise of the individuals as an independent variable while instructional strategy for Mathematics as an intervening variable and school performance as measured by Mathematics results in Board of Secondary Education (SSC-II) Examination as a dependent variable. The descriptive analysis was computed by SPSS version -21 and summarized in table 7.

	Ν	Min	Max	Mean	Std. Dev
Acceptance of change	370	2	5	4.55	.532
Culture of autonomy	370	3	5	4.17	.561
Trust in the expertise of the individuals	370	3	5	4.42	.432
Instructional strategy for Mathematics	370	3	5	4.33	.442
School performance	370	2	5	4.33	.377
Valid N (listwise)	370				

 Table 7. Descriptive Statistics

Acceptance of change

The 'acceptance of change' was studied through 5 items. The responses were collected through 5 point likert scale began from "strongly agree" and end at "strongly disagree". The value '5' was labeled to 'strongly agree' and '1' was labeled to 'strongly disagree'. The minimum value was 2 and maximum value was 5 .The mean scores were around 5 which showed that respondents approved that their schools had acceptance of change between mathematics teachers and HM with regard to teaching learning environment and decision making for the sake of school performance.

Culture of autonomy

The 'culture of autonomy' was studied through 6 items. The responses were collected through 5 point likert scale began from "strongly agree" and end at "strongly disagree". The value '5' was labeled to 'strongly agree' and '1' was labeled to 'strongly disagree'. The minimum value was 3 and maximum value was5. The mean scores were around 4.17, which showed that respondents had experienced culture of autonomyin the school with regard to teaching learning environment and decision making

for the sake of school performance.

Trust in the expertise of individual

The 'trust in the expertise of individual' was studied through 9 items. The responses were collected through 5 point likert scale began from "strongly agree" and end at "strongly disagree". The value '5' was labeled to 'strongly agree' and '1' was labeled to 'strongly disagree'. The minimum value was 3 and maximum value was 5. The mean scores were 4.42, which showed that respondents believed that their HM of the school had trust in the expertise of their mathematics teachers with regard to teaching learning environment and decision making for the sake of school performance.

Instructional strategy for Mathematics

The 'instructional strategies for Mathematics' was studied through 10 items. The responses were collected through 5 point likert scale that began from "strongly agree" and end at "strongly disagree". The value '5' was labeled to 'strongly agree' and '1' was labeled to 'strongly disagree'. The minimum value was 3 and maximum value was 5. The mean scores were 4.33 which showed that respondents employed various effective strategies in their mathematics teaching for the improvement of teaching learning environment and school performance.

School Performance measured by BSEK result

The 'school performance measured by BSEK' was studied through 9 items. The responses were collected through 5 point likert scale that began from "strongly agree" and end at "strongly disagree". The value '5' was labeled to 'strongly agree' and '1' was labeled to 'strongly disagree'. The minimum value was 2 and maximum value was 5. The mean scores are 4.33, which showed that school has performed efficiently in their mathematics examination held by Board of Secondary Education (SSC-II) 2018.

Statistical test

The study explained the relationship between school performance and the three dimensions of spontaneous collaboration as a form of distributed leadership through the computation of Pearson product-moment correlation coefficient (Pallant, 2002). The Pearson product-moment correlation coefficient was used to measure the tendency of the variables to increase or decrease together. The correlation of the variables i.e. acceptance of change, culture of autonomy, trust in the expertise of the individuals, instructional strategy for Mathematics and school performance as measured by Mathematics results in Board of Secondary Education (SSC-II) Examination was computed by SPSS version -21 and summarized in table 8.

Variables	Correlation with School F BSEK	Performance measured by
Acceptance of change	.157**	.000**
Culture of autonomy	.070	.177
Trust in the expertise of individual	274**	.000**
Instructional strategies for Mathematics	.069	.184

Table 8. Statistical test; Correlation among variables

Correlation is significant at the 0.01 level (2-tailed)**

Acceptance of change

The values of the Pearson product-moment correlation coefficient was 0.157 included in acceptance of change, thus the value was significant at 0.05 level as p-value =0.000<0.05, which denoted that positive and strong relationship existed between the school performance and acceptance of change. Hypothesis H1 was therefore rejected here.

Effectiveness of Spontaneous Collaboration as a form of Distributed Leadership in School Performance

Culture of autonomy

The values of the Pearson product-moment correlation coefficient was.070 included in culture of autonomy, thus the value was not significant at 0.05 level as p-value =0.177>0.05, which denoted that no relationship exists between the school performance and culture of autonomy. Hypothesis H2 was therefore accepted here.

Trust in the expertise of individual

The values of the Pearson product-moment correlation coefficient was- .274 included in trust in the expertise of individual, thus the value was significant at 0.05 level as p-value =0.000<0.05, which denoted that negative but strong relationship exists between the school performance and trust in the expertise of individual. Hypothesis H3 was therefore rejected here.

Instructional strategy for Mathematics

The values of the Pearson product-moment correlation coefficient was 069 included in instructional strategies for Mathematics, thus the value was significant at 0.05 level as p-value =0.184 < 0.05, which indicated that the intervening variable was not signified any relationship between the school performance and instructional strategies for Mathematics.

Multiple Regression Analysis

For the sake of appropriate results of the study, Multiple Regression analysis was carried out by two stages.

At first stage, Regression was run between the Independent Variables; sub-scale -1 to 3 and intervening variable i.e. Acceptance of change, Culture of autonomy, Trust in the expertise of the individual and instructional strategies for Mathematics. The regression was summarized from table 9 to 11.

Table 9. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.381ª	.145	.138	.350

Predictors: (Constant), indv-trust in expertise of individual, indv-acceptance of change, indv-culture of autonomy_a Dependent Variable: dpv-school performance_b

Table 10.ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	7.591	3	2.530	20.676	.000 ^b
	Residual	44.791	366	.122		
	Total	52.383	369			

Dependent Variable: dpv-school performance_a Predictors: (Constant), indv-trust in expertise of individual, indv-acceptance of change, indv-culture of autonomy_b

Table 11. Coefficient

	Model	Unstan Coef	ndardized ficients	Standardized Coefficients	t	Sig.
		В	Std.	Beta		
			Error			
1	(Constant)	4.832	.223		21.649	.000
	Acceptance of	.097	.038	.137	2.536	.012
	change					
	Culture of	.138	.041	.205	3.363	.001

autonomy					
Trust in the	342	.048	398	-7.175	.000
expertise					

Dependent Variable: dpv-school performance a

Acceptance of change

The values of Standardized Beta Coefficient was 0.137 included in acceptance of change, thus the value was significant at 0.05 level as p-value =0.012<0.05, which denoted that positive and strong relationship existed between the school performance and acceptance of change. Hypothesis H1 was therefore rejected here.

Culture of autonomy

The values of Standardized Beta Coefficient was 0.205 under culture of autonomy head which was significant at 0.05 level since p-value =0.001 < 0.05, which denoted that positive and strong relationship existed between the culture of autonomy and school performance. Hypothesis H2 was therefore rejected here.

Trust in the expertise of individual

The values of Standardized Beta Coefficient was -.398 under trust in the expertise of individual head which was not significant at 0.01 level since p-value =0.000>0.01, which denoted that strong and negative relationship existed between the trust in the expertise of individuals and school performance. Hypothesis H3 was therefore rejected here.

Then at the second stage, Regression was run between the dependent Variables and intervening variable i.e. School performance as measured by BSEK and instructional strategies for Mathematics. The regression was summarized from table 12 to 14.

Model	R R Sq	uare Ac Sc	djusted Juare	R	Std. Error of the	Estimate	
1	.069 .005	.0	02		.376		
Predictors: ((Constant), inv-instrauc	tionalstrategya					
Table 13.	ANOVA ^a						
Model		Sum Squares	of	Df	Mean Square	F	Sig.
1	Regression	.251		1	.251	1.770	.184 ^b
	Residual Total	52.132 52.383		368 369	.142		
Dependent ` Predictors: (Variable: dpv-school pe (Constant), inv-instrauc	erformance _a tionalstrategyb					
1 able 14.	Coefficient						
Model		Unstandardi Coefficients B	zed	Std.	Stand. Coefficient Beta	t Si	g.
		4.070	Eı	ror		01.117	000
I	(Constant) Instructional strategies for	4.078		.193	.069	1.330	.000 .184
	Mathematics						

Table 12. Model Summary

Dependent Variable: dpv-school performance_a

The multiple regression with three dimensions of spontaneous collaboration i.e. acceptance of change, culture of autonomy and trust in the expertise of individual as an independent variable $R^2 = .145$, F = 20.676, p<.001 signified that the aforementioned variables had relationship with school performance

as measured by BSEK .Similarly, the multiple regression with instructional strategy for Mathematics as an intervening variable $R^2 = .005$, F = 1.770, p>.001 signified that intervening variable did not have any impact on dependent variable.

Conclusion

The present study was focused to find the relationship between the spontaneous collaboration and school performance in Karachi. Mathematics teachers of secondary class were the respondents of the study, who were teaching at different towns of Karachi. The study was focused to find the relationship between the Independent Variables and Dependent Variable i.e. (IV-1) acceptance of change, (IV-2) culture of autonomy, (IV-3) trust in the expertise of individual and (DV) school performance as measured by Mathematics results in Board of Secondary Education (SSC-II) Examination 2018.

The findings and results of the study came to conclusion that the existence of positive and significant relationship has been found between acceptance of change and school performance as measured by Mathematics results in Board of Secondary Education (SSC-II) Examination. On the contrary, it was not hypothesized in the beginning of the study. In addition to this, the study also concluded that the existence of negative and significant relationship was found between trust in the expertise of individual and school performance as measured by Mathematics results in Board of Secondary Education (SSC-II) Examination. Similarly, it was not hypothesized in the beginning of the study. Although the study also concluded one independent variable i.e. culture of autonomy also proved to be significant relationship with the dependent variable Board of Secondary Education (SSC-II) Examination. However, it was also not hypothesized in the beginning of the study.

The results of the study contributed appropriately to the research objectives as well as responded efficiently to the research questions. The three hypotheses were devised for the present study and findings of the study accepted only one hypothesis and rejected two hypotheses. The study illustrated consistent result to the research problem. Thus, it can be concluded that the present study revealed certain aspects of spontaneous collaboration that are significant with the school performance.

Future Research

The distributed leadership was not fully researched through the present study. As distributed leadership have three forms and several dimensions. The present study studied spontaneous collaboration as a form of distributed leadership and has been researched in Karachi only. Thus it gives birth to explore distributed leadership with other two forms intuitive working and institutionalized practices in private and public sector schools. Furthermore, several researches can begin to identify the factors that made HM to accompany distributed leadership in schools. Additionally, the rate of enrollment and rate of survival with respect to distributed leadership can be studied.

Limitations and delimitations of the Research

The present study depends on the data that are collected from teachers and principal of the schools. Both the participants were not easy to approach. As they had some stereotype conception about involving in the research study. Similarly, the population was located far from the researcher and served many duties within limited time of their schooling.

Funding: This research received no external funding.

Conflicts of Interest: The authors declare no conflicts of interest.

Disclosure Statement: Evidently, researchers have not reported any impending conflict of interest.

Reference

Al-Harthi, A. S. A., & Al-Mahdy, Y. F. H. (2017). Distributed leadership and school effectiveness in Egypt and Oman: an exploratory study. *International Journal of Educational Management*, 31(6), 801-813. https://doi.org/10.1108/IJEM-05-2016-0132

Bandura, A. (1977). Social Learning Theory. General Learning Press.

- Tony Bush. (2013). Instructional leadership and leadership for learning: global and South African perspectives, *EducationasChange*, 17(1), S5-S20.https://doi.org/10.1080/16823206.2014.865986
- CheckMarket. (2019). Sample size calculator. https://www.checkmarket.com/sample-size-calculator/
- Clifford, Ellen Behrstock-Sherrat, & Jenni Fetters. (2012). The ripple effect: A synthesis of research on principal influence to inform performance evaluation design. *American Institute for Research*.
- Davis, M. W. (2009). Distributed Leadership and School Performance. ProQuestLLC.
- Fabelo, T. T. (2011). Breaking Schools' Rules: A statewide study of how school disciplinerelates to students' success and juvenile justice involvement. *Council of State Governments Justice Center*.
- Gay, L. (1996). Educational Research Competencies for Analysis and Application. Englewood Cliffs.
- Gronn, P. (2002). Distributed leadership as a unit of analysis. Leadership Quarterly .
- Hutchins, E. (1995). Cognition in the wild. MIT Press.
- Sadruddin Bahadur Qutoshi & Jan-e-Alam Khaki. (2014). The role of a principal / headteacher in school improvement: A case study of a community-based school in Karachi, Pakistan. *Journal of Research and Reflections in Education*, 8 (2), 86-96.
- Kenneth Leithwood, Christopher Day, Pam Sammons, Alma Harris & David Hopkins. (2006a). Successful school leadership: what it is and how it influences pupil learning. *DfES Publications*
- Yan Liu &Mehmet Şükrü Bellibaş. (2018). The effects of principals' perceived instructional and distributed leadership practices on their perceptions of. school climate. *International Journal* of Leadership in Education . 21(2), 226-244. https://doi.org/10.1080/13603124.2016.1147608
- Muhammad Niqab, Sailesh Sharma, Leong Mei Wei & Shafinaz Bt A. Maulod.(2014). Instructional leadership potential among school principals in pakistan. *International Education Studies*, 7 (6), 74-85. http://dx.doi.org/10.5539/ies.v7n6p74
- <u>Christine M. Neumerski</u>. (2012). Rethinking instructional leadership, a review: What do we know about principal, teacher, and coach instructional leadership, and whereshould we go from here? *Educational Administration Quarterly*, 49(2) 310-347. https://doi.org/10.1177/0013161X12456700
- Pakistan, M. o. (2017). National Education Policy. National Education Policy 2017-2025 . Islamabad.
- Hassanreza Zeinabadi & Hassan Rastegarpour. (2010). Factors affecting teacher trust in principals: Testing the effect of transformational leadership and procedural justice. *Procedia-Social and Behavioral Sciences*, 5(2010)1004–1008.
- Salfi, N. (2011). Successful leadership practices of head teachers for school improvement. *Journal of Educational Administration, 49* (4), 414-432.
- Skiba, R. &. (2006). Zero tolerance, suspension, and expulsion: Questions of equity and effectiveness. In C. E. Weinstein, *Handbook of classroom management: Research, practice, and contemporary*. Lawrence Erlbaum Associates.
- Spillane, J. (2006). Distributed leadership. Jossey-Bass.
- Spillane, J. (2007a). Distributed Leadership in Practice. Teachers College Press.