



IMPACT OF LEADERSHIP AND SCHOOL CULTURE ON STUDENTS' ACADEMIC PERFORMANCE

Santhiyappan Karunakaran¹ⁱ,
Mazuki Jusoh²,
Karuthan Chinna²

¹Research Scholar,
Faculty of Management and Business,
Management & Science University,
Malaysia

²Professor,
Faculty of Management and Business,
Management & Science University,
Malaysia

Abstract:

The major objective of this study was to ascertain the relationship between school culture, leadership and students' academic performance in Mathematics for secondary-level classes. This study was conducted in two districts in the plantation areas of Sri Lanka. A total of 158 teachers who were selected randomly responded to a questionnaire. Two hypotheses, which were tested using correlation analyses, revealed that there was a statistically significant relationship between leadership, school culture and academic performance of students. The finding leads to important implications to promote education of children in the plantation sector.

Keywords: school culture, leadership, school improvement, academic performance

1. Introduction

Similar to other concepts in the field of education there is no agreement among scholars regarding the definition of school culture as they vary according to time and context (Deal & Peterson, 1999). According to Coakly (2013), school culture can be defined as the underlying norms, beliefs, values, and customs that make up the way staff members, parents, community members, and students feel, act and behave within the school. School culture plays an important role on its success and students' academic

ⁱ Correspondence: email karunaharan25@gmail.com, skarunaharan@yahoo.com

achievements (Muhammad, 2009; De Hart, 2003). As a leader of the school, the principal normally has a major influence on its culture. The principal's impact is mostly via teachers who are directly involved in the classroom teaching learning process as well as interacting with the students. The studies by Muhammad (2009) and De Hart (2003) further mentioned that positive school culture contributes to the higher achievement of students. In doing so, school principals are challenged with shaping and fostering the right school culture that can address problems and shape positive attitudes among students, encourage and support teachers, and satisfy the academic needs of every student. Negative school culture correlated with negative atmosphere and *vice versa* (Coakly, 2013). In the contemporary field of educational research on school culture, the following four main areas are gaining importance: (a) the relationship between school culture and change, (b) impact of school culture on student achievement, (c) causes for positive and negative cultures, and (d) leader's role in rebuilding school culture (De Hart, 2003; Peterson, 2002). Previous studies revealed the pivotal role of school principal in the process of enhancing students' achievement and fostering a positive school culture in order to achieve success (Piotrowasky, 2016; Quin et al. 2015). In Sri Lanka, there were studies (Zarookdeen, 2008; Ranatunga, 2013; Ramathass, 2013; Nimal, 2008; Gunaratne, 2007) conducted on the factors affecting the achievement of student in schools. However, still there is a dearth of studies focussing on the impact of Principal's transformational leadership style and school culture on student performance in Sri Lanka. Accordingly, the present study intends to fill this knowledge gap.

2. Literature Review

Taahyadin & Daud (2018) studied school culture and challenges in school improvement in the state of Kedah, Malaysia. The aim of their study was to identify the school's culture practices in Kedah and the challenges in enhancing the school's performance faced by school management. A total of 375 teachers working in high-school teachers were selected as respondents to answer the School Culture Triage Survey Questionnaire (Wagner, 2006 as cited in Taahyadin & Daud, 2018) while five management representatives were interviewed in relation to the improvement challenges. The results revealed that it is necessary to make improvements in the daily activities of the school to create a positive school culture in order to increase student performance. These findings have been supported by other studies such as by Quin et al. (2015), Bektas et al. (2015), Smith (2014) and Engels et al. (2008).

Quin et al. (2015) studied the relationship between school culture, leadership and students' achievement. Their objective was to determine the relationship between leadership practices, school culture, and student achievement. Correlation research design was used to determine the relationship between the variables and 216 teachers from 31 schools were taken as respondents. The results revealed that there was a significant relationship between school culture and student achievement. The study further emphasized that those school leaders who use transformational leadership

practices indirectly impact student achievement through creating a positive school culture.

Bektas et al. (2015) conducted a meta-analysis on fifty-four studies on school culture and academic achievement of students. Based on the findings from the analysis, it was confirmed that school culture had a statistically significant effect on students' academic achievement.

Smith (2014) studied the effect of school culture on student achievement. The findings from the study suggest three interpretations. First, whether teachers' perceptions regarding their school leadership addresses their concerns is a strong indicator of the culture of the school. Secondly, teachers' effectiveness is impacted by their administrators' reaction to their concerns. Finally, the study also proved that satisfaction or dissatisfaction of teachers with their school leadership was significantly associated with student achievement.

Engels et al. (2008) studied the principals in schools where there was a positive culture. The findings revealed that schools with very positive school culture the principals had very high achievement orientation. The principals also focused on creating flexible, stimulating, participative and supportive environment.

The above findings reveal that positive or conducive school culture and effective leadership are important to enhance student's academic performance. However, the above-mentioned studies were conducted in urban settings and there is a dearth of studies which focuses on the school culture, transformational leadership and educational performance of the plantation or other disadvantaged children. For historical reasons plantation sector schools had to wait about twenty years to be integrated into the national education system in Sri Lanka (Thanaraj, 2004 & 2008; Ramathass, 2013 & 2019)*ⁱⁱ. Therefore, the present study intended to address the knowledge gap on the impact of school culture and transformational leadership on students' academic performance in the plantation sector schools and also attempt to suggest relevant suggestion to promote education of such children.

3. Methodology

This study was conducted using a questionnaire consisting of three sections in which the first section deals with the demography of the teachers and the second section measures the teachers' perception of school culture under six dimensions namely collaborative leadership, teacher collaboration, professional development, unity of purpose, collegial support and learning partnership. The third section measures the teachers' perception of transformational leadership style of principal under four dimensions namely idealized influence, inspirational motivation, intellectual stimulation and individualized consideration. The teachers' perception on school culture and leadership are measured

ⁱⁱ Dualism in education was removed by the Assisted Schools and Training College Act of 1960 by which almost all the missionary schools were taken over by the government. But about 800 plantation schools were not integrated into the national education system.

by a five-point Likert-scale rating from 1 (strongly disagree) to 5 (strongly agree), with 3 being neutral.

The school culture variable has six dimensions. The first dimension is collaborative leadership and it was measured by eleven items which includes for example, the principal's appreciation of the ideas forwarded by teachers. Under the dimension of teacher collaboration, there are six items which include, for example, the opportunities that teachers have to discuss about learning difficulties faced by students. As for the professional development dimension, there are five items, which include suggestions made by supervisors to be considered in classroom teaching. The dimension of unity of purpose was measured by five items which includes, for example, teachers' dedication towards the success of school. As for the collegial support, the dimension has four items including, for example, teachers' dedication towards the school's vision. The dimension of learning partnership was measured by four items which includes, for example, teachers' interest in improving students' performance. Measures for the above six dimensions were adapted from School Culture Survey (SCS) developed by Gruenert & Valantine (1998).

The six dimensions of the school culture is further explained by the following domains in the SCS below:

1. Collaborative Leadership (CL)

Collaborative leadership is the degree to which the principal develops mutual affiliations with the faculty or the degree to which school leaders establish and maintain collaborative relationship with school staff.

2. Teacher Collaboration (TC)

Teacher collaboration is the extent to which teachers work together as a group to improve instructional practices and to meet organizational goals or the degree to which they engaged in constructive dialogues that target the educational vision of the school.

3. Professional Development (PD)

Professional development means the extent to which the school teachers attend professional development programmes such as seminars, conferences, study group etc.

4. Unity of Purpose (UP)

Unity of purpose is the degree to which stakeholders work towards the common mission of the school or the degree to which teachers work toward a common mission for the school.

5. Collegial Support (CS)

Collegial support is the extent to which teachers trust and work together to achieve the objectives of the school or the degree to which teachers work together effectively.

6. Learning Partnership (LP)

Learning partnership is the extent to which principal, teachers and parents work together to improve the performance and achievement of the student or the degree to which teachers, parents and students work together for the common good of the student.

Twenty items on a five-point Likert scale in the third section of the questionnaire measured the Principal's leadership style variable in this study. The leadership variable consists of four dimensions containing items, which were developed, based on the work

of Thanaraj (2008) and Ross and Gray (2006) on Transformational leadership style. The dimension of idealized influence is measured by using eight items, which include, for example, principal's punctuality in school activities. Under the dimension of inspirational motivation, the measure has four items, which include, for example, the efforts taken by the principal to motivate his teachers towards the achievement of school goals. As for the intellectual stimulation, the dimension measures as to what extent the teachers have received stimulation from the principal. The dimension of individualized consideration has four items which include, for example, principal assigning responsibilities to teachers.

Finally, with regard to the student's performance, the present study utilizes students' examination scores in mathematics, which were provided by the sample schools.

A total of 158 respondents (teachers) from plantation-sector secondary schools in two districts namely Nuwara-Eliya and Ratnapura participated in this survey. The sample schools of the present study can be categorized into three types (strata): type 1AB, type C and type 2 schools. Type 1AB schools have General Certificate of Education (Advanced Level) science stream. Type C schools have Advanced Level classes without science stream. Type 2 schools have classes up to Ordinary Level. When the population consists of a number of subgroups (or strata) that may differ in the characteristics being studied, it is often desirable to use a stratified sampling (Ary et al. 2010). Consequently, the present study followed stratified sampling. In addition, the sample schools varied by the quality of human and physical resources, infrastructure, and the socio-economic status etc.

Previous studies have proved that there is a significant relationship between (a) school culture and students' performance (Piotrowsky, 2016; Quin et al. 2015; Demirtas, 2010; MacNeil et al. 2009; Ohlson, 2009) and between (b) transformational leadership style and school culture (McGuffin, 2011; Jeff Quin et al. 2015).

Based on the above studies the following three hypotheses were formulated to study the situation in the plantation sector in Sri Lanka. It should be mentioned here that previous studies have not focused on plantation-based students and disadvantaged children.

The following two hypotheses were formulated and tested to achieve the objectives of the current study:

H1: There is a significant relationship between the Principal's leadership and school culture.

H2: There is a significant relationship between school culture and students' performance.

The reliability of the measure is established by testing for both consistency and stability. In the present study the Cronbach's alpha values for all constructs exceed 0.8.

In addition, the discriminant and convergent validity of the constructs were determined using factor analysis. Cohen (2007) stipulates that correlation between the constructs should be within 0.3 and 0.9. The analysis for the school culture and leadership

showed the correlation of constructs were 0.847 and 0.769 respectively. Within 0.3 and 0.9. Thus, all the items in the construct correlate adequately within the specific constructs.

4. Results and Discussion

Pearson correlation analysis was used to test the relationship between transformational leadership style, school culture and students' performance, and the results are shown in Tables 1 and 2.

Table 1: Correlation between transformational leadership style and school culture

		SCS	IIA	IIB	IM	IS	IC
Pearson Correlation	SCS	1.000	.753*	.823*	.800*	.697	.728*
	IIA	.753*	1.000	.640*	.739*	.619*	.667*
	IIB	.823*	.640*	1.000	.606*	.643*	.597*
	IM	.800*	.739*	.606*	1.000	.585*	.672*
	IS	.697	.619*	.643*	.585*	1.000	.836*
	IC	.728*	.667*	.597*	.672*	.836*	1.000

Dependent Variable: School Culture (SCS)

Key: IIA- Idealized Influence – Attribute; IIB- Idealized Influence – Behavior; IM- Inspirational Motivation; IS- Intellectual Stimulation; IC- Individual Consideration; SCS– School Culture Survey

As shown in Table 1, there is a significant relationship between transformational leadership style and school culture. The correlations indicated with asterisks (*) show the p-values of transformational leadership style domains except for the dimension IS are below 0.05. Hence, statistically there is a significant relationship between transformational leadership style and school culture.

The finding is consistent with other studies conducted on leadership, school culture in other countries such as United States of America (McGuffin, 2011; Quin et al. 2015).

Table 2: Correlation between school culture and student performance

		Marks	SCS
Pearson Correlation	Marks	1.000	.228
	SCS	.228	1.000
Sig.	Marks		.039
	SCS	.039	

Dependent Variable: Student Performance (Marks), Key: SCS – School Culture Survey

As shown in Table 2, the p-value (below 0.05) indicates a statistically significant relationship between school culture and students' performance.

The finding is consistent with other correlation studies conducted on school culture and students' performance in other countries such as United States of America (Quin et al. 2015; Demirtas, 2010; MacNeil et al. 2009; Ohlson, 2009).

According to the above results, school culture significantly predicts the student achievement in the plantation sector schools in Sri Lanka. While comparing the present

study results with previous studies the correlation between school culture and student achievement has long been assumed to be positive (Quin et al. 2015; Demirtas, 2010).

Since the results of this study as well as other studies (MacNeil et al. 2009; Ohlson, 2009) have proved that school culture has a strong linkage with student performance, efforts can be taken by all stakeholders to improve such positive culture in schools. For example, schools can develop a positive school culture using a participative approach such as involving relevant stakeholders constantly in school activities.

Consequently, the principals need relevant competencies such as adopting participative approach and empathetic listening to issues brought by stakeholders to improve the positive culture in their schools. It is important to include these competencies in the professional training programme for principals. In addition, educational policy makers should make provision for adequate funding to enhance the principals' competencies. At present, the professional training programmes of the school principals in Sri Lanka follow a cascade model, which seldom considers the specific situation particularly in faraway schools. Particularly the plantation schools, the educational and professional qualifications of academic staff including principal are much lower than the national level (Thanaraj, 2004 & 2008; Ramathass, 2013 & 2019). Furthermore, these schools are situated in hilly areas and have difficulty for accessibility and the literacy level (Department of Census and statistics, 2012) of adults is much lower (66%) than the national level (92%). The culture among schools is very much different and varied based on their history and socio-economic background. This important aspect should be taken into consideration in future training of the principals.

Findings of the study are more important in the case of plantation schools which have a history of negligence for more than three decades since the country receives independence in 1948 (Thanaraj, 2008; Ramathass, 2013 & 2019). However, the situation in these schools has relatively been improving in recent times due to a number of factors such as recruitment of teachers, more inputs from the authorities and more community awareness. For example, the number of teachers from the plantation community has increased to an amount of 12,000 from a few hundred in 1970s. Infrastructure and other facilities of some 400 schools have been improved by generous funding from Swedish International Development Agency (SIDA) in 1980s and 1990s (Thanaraj, 2004 & 2008; Ramathass, 2013 & 2019). Hence, if the school leadership can develop a positive school culture in their schools, the performance of students will significantly improve and the schools in general can move to the next level of development.

5. Conclusion

The results from this study revealed a statistically significant relationship between school culture and principal leadership style. Hence, the characteristics of school culture are highly influenced by principal, teachers and other staff (i.e., school community) in the school. As a result, higher commitment of school community is needed to build a positive school culture in improving the students' performances as well as the school development.

The results of this study show that there are inter-relationships exist between principals' leadership, school culture and students' performance. The effective leadership and positive school culture would lead to improved students' performance.

Moreover, the results revealed that there is a statistically significant relationship between school culture and students' performances. Therefore, it could be concluded that the school principals, teachers and other staff have to work towards building and developing a positive school culture in the school that would improve the students' performance. Given the historical background of these schools as well as the current socio-economic status of the community, relevant actions should be taken by the authorities as well as the community to support the school principal and his/her team to develop a positive culture in the school that would ultimately improve the overall performance of the students.

References

- Ary, D., Jacobs, L. C., & Shrensen, C. (2010). *Introduction to Research in Education, Eighth edition*, Wadsworth, CA, 94002-3098, USA.
- Bektas, F., Cogaltay, N., Karadag, E., & Ay, Y. (2015). School Culture and Academic Achievement of Students: A Meta-analysis Study, *Anthropologist*, 21(3): 482 – 488.
- Coakley, P. (2013). *Shaping School Culture: to Support Moving from a Targeted- Assistance to School wide Title 1 Program*, Dissertations and Thesis Paper 1067.
- Cohen, L., Manion, L., & Morrison, K. (2007). *Methodologia ekpaideftikis erevnas [Educational research methodology]* (S. Kyranakis, M. Mavraki, Ch. Mitsopoulou, P. Bithara, & M. Filopoulou, Metaf.). Athina: Metaichmio.
- De Hart, T. (2003). *Building positive school culture to increase achievement*, Retrieve http://www.maripublicschools.org/MSDE/divisions/leadership/programs/leadership_learning_series/series2.htm
- Deal, T. E. & Peterson, K. D. (1999). *Shaping School Culture: The Heart of Leadership*. San Francisco: Jossey-Bass Publishers.
- Demirtas, Z. (2010). The relationship between school culture and student achievement. *Education and Science*, 35 (158), 3- 13.
- Department of Census and statistics. (2012). *Census of Population and Housing*, retrieved from statistics.gov.lk
- Engles, N., Hotton, G., Devos, G., Bouckenoghe, D. & Aelterman, A.(2008). Principals in school with a positive school culture, *Educational Studies*, 34(3), 159 – 174. doi. :1080 /03055690701811263.
- Gruenert and Valentine (1998). *School Culture Survey*, University of Missouri, www.mllc.org.
- Gunaratne, P. A. M. P. P. (2007). *An investigation on the achievement of primary students and the family environment*, Unpublished M.Phil. Thesis, University of Colombo, Sri Lanka. (Sinhala Version).

- Quin, J. L., Deris, A. R., Bischoff, G. & Johnson, J. T. (2015). The correlation between leadership, culture, and student achievement. *The Online journal of New Horizons in Education*. Vol.5, Issue 2, 55-62.
- MacNeil, A. J., Peter, D. L., & Busch, S. (2009). The effects of school culture and climate on study achievement. *International Journal of Leadership in education* 12(1), 73-84. doi 10. 1080/13603120701576241
- McGuffin, S. R. (2011). *Exploring the direct and indirect effects of the school leadership on student achievement in Kentucky high schools*. Dissertations, Paper 10. <http://digitalcommons.wku.edu/dis/10>
- Muhammad, T. (2009). *Transforming school culture: How to overcome staff division*. Bloomington, IN: Solution Tree Press.
- Nimal, W.A. (2008). *A critical study on the influence of the school and socio-economic factors in the achievement of students: A special reference on Hambantota District Rural schools*, Unpublished M.Ed. Thesis, University of Colombo, Sri Lanka. (Sinhala Version)
- Ohlson, M. (2009). Examining instructional leadership, a study of school culture and teacher quality characteristics influencing student out comes. *Florida journal of educational administration and policy* 2(2), 102- 113.
- Piotrowsky, M. J. (2016). *Impact of leadership on school culture and student achievement*, A PhD dissertation presented to the Graduate school of Clemson University. http://tigerprints.clemson/all_dissertations
- Ramathass, P. (2013). *Deployment of Teachers in Plantation Sector and Its Impact on the Quality of Education with Special Reference to Tamil Medium Schools in Hatton Educational Zone*, Unpublished M.Phil Thesis, University of Colombo, Sri Lanka. (Tamil Version).
- Ramathass, P. (2019). *Malayaga samooga mempattil aasiriyargalin vagipangu, ira sivalingam memorial lecture*, Memorial Committee, Colombo, Sri Lanka. (Tamil Version).
- Ranatunge, R. R. (2013). *A study on the impact of family factors on the educational achievement of the secondary school children in Sri Lanka*. Unpublished M.Phil Thesis. University of Colombo, Sri Lanka. (Sinhala Version).
- Ross, J., & Gray, P. (2006a). School leadership and student achievement: The mediating effects of teacher beliefs. *Canadian Journal of Education*, 29(3), 798-822.
- Ross, J., & Gray, P. (2006b). Transformational leadership and teacher commitment to organizational values: the mediating effects of teacher collective efficacy. *School Effectiveness and School Improvement*, 17(2), 179-199.
- Smith, B. J. (2014). *The effect of school culture on student achievement*. PhD Thesis submitted to the East Carolina University.
- Taahayadin, F. & Daud, Y. (2018). School culture and school improvement challenges in Kedah. *Journal of Business and Management*. Vol.20, Issue 6, 25-30.
- Thanaraj, T. (2004). Problems and Issues in Primary and Secondary Education in the Plantations, *Sandrasegarammanivizha malar*, Colombo, Sri Lanka, pp259-268.
- Thanaraj, T. (2008). *Leadership Theories: An Introduction*, Semamadu Pathippagam, Colombo, Sri Lanka. (Tamil Version).

- Thanaraj, T. (2008). Odukkappattor kalvi: Malayagak kalvi pattriya aaivu, *Peraasaan kamunist kaarthigesan memorial lecture*, Ceylon Progressive Art and Literary Council, Colombo, Sri Lanka. (Tamil Version).
- Zarookdeen, S. S. (2008). *The Achievement level of students in the subject of mathematics and the opportunity for mathematical Education in the Tamil Medium Schools in Kandy District*, Unpublished M.Phil Thesis submitted to the University of Jaffna, Sri Lanka. (Tamil Version).

Creative Commons licensing terms

Authors will retain copyright to their published articles agreeing that a Creative Commons Attribution 4.0 International License (CC BY 4.0) terms will be applied to their work. Under the terms of this license, no permission is required from the author(s) or publisher for members of the community to copy, distribute, transmit or adapt the article content, providing a proper, prominent and unambiguous attribution to the authors in a manner that makes clear that the materials are being reused under permission of a Creative Commons License. Views, opinions and conclusions expressed in this research article are views, opinions and conclusions of the author(s). Open Access Publishing Group and European Journal of Management and Marketing Studies shall not be responsible or answerable for any loss, damage or liability caused in relation to/arising out of conflict of interests, copyright violations and inappropriate or inaccurate use of any kind content related or integrated on the research work. All the published works are meeting the Open Access Publishing requirements and can be freely accessed, shared, modified, distributed and used in educational, commercial and non-commercial purposes under a [Creative Commons Attribution 4.0 International License \(CC BY 4.0\)](https://creativecommons.org/licenses/by/4.0/).