Educational Leadership Styles, Secondary School Performance and Learner's Achievement in Mauritius

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Abstract--The paper intends to understand the role of leadership management in the provision of Quality Education in Secondary Schools (Public and Private) in Mauritius. A model developed to test the significant relationship between the endowment of Quality Education in the Aided Private Secondary Schools, Public Secondary Schools, and the role of leadership management in Mauritius. Data collected from educators and the school leaders (rectors) working in 50 Private secondary schools and 46 state secondary schools. Structural Equation Modelling was adopted to test the set hypothesis for 404 (149 state secondary schools; 255 private secondary schools) respondents, including rectors, educators, administrative staff, and the Ministry (Public and Private). The outcome specified that Leadership is positively related to the impartment of quality education in the Mauritian secondary schools. Also, subordinates' attitude towards their job enhances relational obligation among school leaders and educators, which in turn positively transmits to the development of job satisfaction and performances. Further, the leadership style of the school leaders may enhance the school performance and the learners' achievement. Suggestions for theory and practice discussed in-depth, and directions for future research recommended.

Keywords--Educational Leadership Style; Performance; Secondary Schools; Mauritius; SEM.

I. INTRODUCTION

Mauritian Education System

The Mauritian education structure mainly distributed into pre-primary; primary; secondary (mainstream and prevocational stream); and Tertiary Education. Student (s) can only start secondary and prevocational stream after completing the Primary School Achievement Certificate (PSAC). The Minister of Education came forward with the vision of effecting the `Nine-Year Schooling`. The nine-year schooling will help to hold children in the school system for three more years. The children must compulsorily attend school up to Grade Nine. Then they will sit for the `National Certificate of Education` (NCE) and then will be enrolled in the academic stream or the prevocational stream. When the students complete Grade Ten, they will need to sit for the O-Level Examinations in Grade Eleven. The students who can clear these examinations will enrol in Grade Twelve and A-Level exams in Grade thirteen. The PSAC examinations are conceded by the `Mauritius Examination Syndicate` and the `NCE.` The O-level and A-level examinations are approved by the University of Cambridge. Mauritian education is

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generallybuiltbased on the British system.The Tertiary Education is offered by a series of National and International Universities in Mauritius.
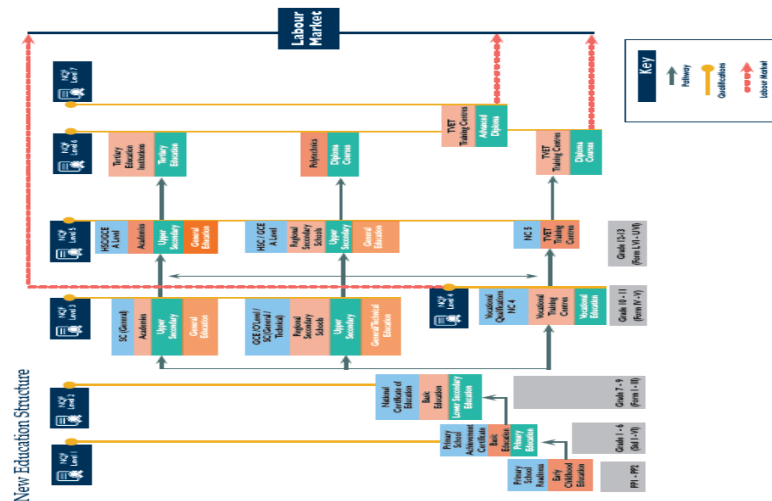
Figure1: Secondary School Structure- Mauritius.

Source: Source: Inspiring Every Child (2017)

Quality Education-Mauritius

Mauritius is heading towards focusing more on education and more on education quality. The`Ministry of Education and Human Resources` (MEHR)vision is to giveplatform for eminence education and transform Mauritius into a knowledge hub (MOEHR 2014). As of 2012, the MEHR is providing a monthly per-capita grant of Rs200, which was earlier granted only to children of age four plus. This grant has stretched to those of age three-plus, and about 22,360 children are attending private Pre-Primary schools are benefitting out of this scheme (MOEHR 2014).
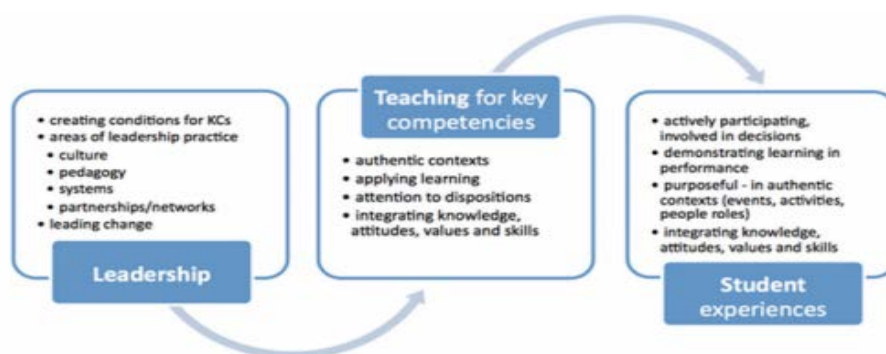
Leadership

Agreeing with Rawat et al. (2019), Leadership is a crucial constituent determining the success of an establishment and the same with the education. Many leadership styles in the education system have made their presence fondled in the field of education, especially regarding the promotion of quality education (Clipa and Greciuc,2018). Karani (2011) discovered that Leadership has a constructive influence on Total Quality Management Managerial decisions, and it directly affects the execution procedure. Leadership cuddles collaborative processes

like motivation, communication, coaching, and the capability to demonstrate in achieving the (Ilies and Metz (2017; Saad, Sudin and Shamsudin, 2018).

The importance and the backbone theories of Educational Leadership

Educational Leadership may define as the extent to which the versatile school leaders blend several appropriate leadership styles to handle the day to day crisis of the educational institution (Roegman and Woulfin, 2019). The `Quality Assurance and Inspection Division` (QAID) was established by the `Department of Education;, `Tertiary Education`;`Science and Technology` (MOEHR, TE & SR) to indorse educational leaders and educators.

In 2016, the Pay Research Bureau upheld the prerequisite for a Diploma in Management or Educational Management appoint as Rector. The newly recruited educational leaders further trained through crash courses in school leadership and school management. The mentoring and coaching are usually done by skilled and expert trainers of the respective Ministry to boost newly appointed rectors and deputy rectors with extraordinarily active and productive leadership styles.

Figure2: School Leadership Model

Source: New Zealand Curriculum online (2014).

According to `The New Zealand Curriculum Online` (2014), school leadership theatres an active part in the accomplishment of the significant aptitudes. The active leaders create environments necessary for the achievement of critical skills. They need to ensure that the culture, pedagogy, systems, partnerships, and networks in schools sustain critical competency development (Berkovich, 2016). Leaders also require knowledge and expertise in directing change (Roegman and Woulfin, 2019). The educational leaders and their leadership style do engender the transformation in the environment of the schools (Marshall and Khalifa, 2018; Islam et. al., 2018; Berkovich, 2016; Bush, 2014; Gok et. al. (2017); Kalshoven et. al. 2013; Gu et. al. 2015; Eva et. al. (2018); Odoardi et. al., 2019; Demirtats et. al., 2017; Chan, 2019; Khan et. al., 2015; Warwas (2015); Nekhili et. al., 2018). An appropriate and effective leadership style boosts the school's performance and the learners' achievement. The theories reviewed are for the study are; Instructional Leadership (Cale et al., 2015); Transformational leadership (Graves et. al. 2019); Moral leadership (Wong, 1998); Gok et. al. (2017); Participative leadership (Lythreatis et. al. 2019) Managerial leadership (Nwibere, 2013).
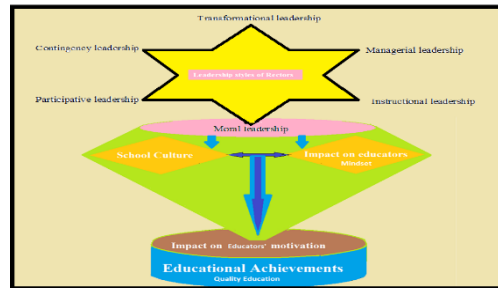
Figure3: Proposed Conceptual Framework.

Source: Author's Design

The conceptual framework of the Mauritian Education System has designed. The application of the right leadership styles will have a positive impact in creating a positive school culture in motivating the educators in improving the performance of the students (Northouse, 2013).

II. MATERIALS AND METHODS

Methods

Participants and response rate

This study incorporates an empirical approach, and the key actors are the school leaders (Rectors), educators, and administrators of Mauritius State Secondary Schools (SSS) and Grant-aided Private Secondary Schools (GPSS). The questionnaires distributed to school leaders, educators, and rectors. Five hundred questionnaires distributed with the help of a drop-off survey, out of which 404 respondents used as data for the analysis (Kothari, 2004; Rowley, 2014).

Procedure

The data is analysed and tested the set Hypothesis using software SPSS AMOS. Factor Analysis and Confirmatory Factor Analysis computed, followed by SEM. Finally, a path diagram is drawn. The demographic profile tested with descriptive statistics, inferential statistics calculated to understand the impact of each dependent variable and independent variables, and its influence to conclude on the findings, recommendations, and implications. Advanced methods, such as multiple regression and structured equation modeling (SEM), are computed.

III. RESULTS

Measure Development

The multi regression used to measure the unit of association among the authentic values and the predicted values of the QESS. A linear blend of `Leadership Styles`, `Organization Culture`, `Respondents' Attitude towards the job`, `Self-efficacy`, `Respondents' non-work-related activities`, `Self-concept`, and respondents' `Perception`, with 0.765 determine a reasonably solid correlation. The coefficient of self-concept (0.807) and leadership style

(0.631) has the highest degree of effect on QESS. The other variables like work culture (0.379), respondents' attitude (0.341); respondent's contribution in non-work-related actions (0.339); self-efficacy (0.232) have inadequate effect.

H1: `Education`has a no influence on work life quality of the respondents.

Table1: Chi-square Test: H1

| Education | Work-Life quality Levels | | | No. | Chi² | P value |
	Low	Modest	Greater			
UG	80 (22.2%) [63.0%]	174 (48.2%) [74%]	107 (29.6%) [77.5%]	361		
PG	35 (29.7%) [27.6%]	53 (44.9%) [22.6%]	30 (25.4%) [21.7%]	118		
Above PG	12 (57.1%) [9.4%]	8 (38.1%) [3.4%]	1 (4.8%) [0.7%]	21		
Total	127	235	138	500		

Source: Author compilation

Hypothesis rejected at a 1 percent, as P value is less than 0.0, and there is an impact of education on quality of work. Graduate with low levels are, 22.2 %; 48.2 % moderate; 29.6 % high level. In case of PG, 29.7% is at lower level, 44.9% modest; and 25.4% atgreater level; above PG 57.1% at lower level; 38.1% modest levels and 4.8% at greater level of quality work life.

H2: There is no considerable variation among the work experiences of the respondents (rectors/educators) and `Socio-psychological Factors` of QESS.

`F` Test computed, and results summarized in Table2.

Table2: Work Experience and `Socio-psychological Factors` of QESS.

Socio-psychological Factors	Total Work Experience	Σ	σ	F	P value
Leadership Style	Below 5	23.37[b]	3.52	8.015	0.000**
	6-10	22.30[a]	3.40		
	11-20	21.84[a]	3.93		
	Above 21 years		3.43		
Work Culture	Below 5	24.58[b]	3.51	3.565	0.029*
	6-10	23.81ab	3.48		
	11-20	23.66[a]	3.16		
	Above 21		3.31		

	years				
Respondents Attitude to Job	Below 5	22.56	3.12	2.920	0.055
	6-10	22.63	3.23		
	11-20	21.65	3.73		
	Above 21 years		3.73		
Occupational Self Efficacy	Below 5	24.01	3.20	1.245	0.289
	6-10	23.71	3.36		
	11-20	24.41	3.19		
	Above 21 years		3.90		
Non Work Related Actions	Below 5	18.16	4.41	1.340	0.263
	6-10	18.06	5.63		
	11-20	17.13	6.62		
	Above 21 years		5.53		
Self-Concept	Below 5	24.10	3.07	2.130	0.120
	6-10	24.63	2.96		
	11-20	24.71	2.99		
	Above 21 years		3.12		
Respondents Perception	Below 5	12.01^{b}	1.92	4.234	0.015*
	6-10	12.04^{b}	1.59		
	11-20	11.37^{a}	2.13		
	Above 21 years		2.18		
Quality of Work-Life	Below 5	58.07	8.62	0.697	0.498
	6-10	57.44	7.64		
	11-20	56.95	7.95		
	Above 21 years		2.57		
Respondents Satisfaction	Below 5	7.25	1.43	0.019	0.981
	6-10	7.26	1.32		
	11-20	7.22	1.54		
	Above 21 years		1.37		
Respondents Performance	Below 5	11.05	2.20	2.207	0.111
	6-10	11.21	2.14		
	11-20	10.57	2.64		
	Above 21 years		2.22		

Source: Author compilation

The Null Hypothesis is 1 % (0.01*- leadership styles); and perception (0.015) is rejected for work culture (0.029); Attitude towards job (0.055), Self-Efficacy (0.289), Non-work Related Activities (0.263), Self-Concept (0.120), QESS (0.498), Satisfaction (0.981) and Performance (0.111), is accepted.

H3: There is no major change among `Mean Ranks` to the perception of respondents (rectors/educators) towards leadership styles.

Table3: Friedman Test- H3.

Opinion towards Leadership Styles	`Mean Rank`	Chi2	P-Value
Higher authorities arouse passion to accomplish my objectives.	3.51		
Higher authorities provide innovative path with sophisticated ideas when needed.	3.83		
Higher authorities give vibrant tutoring roughly about the correct way of performing the task.	4.00		0.000**
Higher authorities don't engross into any act until required.	2.45	341.872	
Higher authorities ask for enhancement as soon as performance is below his/her expectancy.	3.85		
Higher authorities provide incentive or reprimand conferring to consequence of my enactment.	3.36		

Source: Author compilation

The Null Hypothesis is rejected at a 1 percent. since the P-value is less than 0.01, and there is a substantial relationship among`Mean Ranks` of perception and leadership styles contributing to QESS.

H4: There is no substantial change among `Mean Ranks` of perception and respondents (rectors/educators) attitude towards their job.

Table4: Friedman Tests: H4

Opinion on respondents Attitude towards Job	`Mean Rank`	Chi-square value	P-Value
Higher authorities listen to recommendations.	3.45		
If provided a choice to discover innovative and improved methods to get the work thru.	3.10		
There is no delay in taking any decisions.	3.67	61.355	.000**
Excessive stress leads to energy burnout	3.66		
Higher authorities are very effective in updating me with activities of the	3.36		

organization.	
The Ministry has made a easy and healthy work atmosphere.	3.77

Source: Author compilation

Null Hypothesis rejected at 1 (0.01) percent level since there is a substantial change among `Mean Ranks` on perception of respondents (rectors/educators)and attitude to the job.

H5: There is no substantial relationship among respondents1 (rectors/educators) performance, satisfaction, performance, and work quality.

Table5: Analysis of correlation- Performance and Work Quality.

Variables`	Work Quality	Respondents Performance	Respondents Satisfaction
Work Quality	1.000	0.363**	0.431**
Respondents Performance	-	1.000	0.425**
Respondents Satisfaction	-	-	1.000

Source: Author compilation

The Correlation Coefficient among work quality respondents (rectors/educators) Performance (0.363) indicating 36.3% positive relationship; 43.1% satisfaction and 42.5% (1%). Therefore, the Null Hypothesis is rejected at 1% (Mishra & Pandey 2018; Graves et al., 2019).

Structural Equation Modelling (SEM)

The variables are tested for reliability and validity, as explained in the earlier analysis. First, the correlation among the variables examined and the impact of each variable on the other is analyzed. The results show there is a significant impact on all the variables tested and satisfying the set objectives and Hypothesis.

Table6: Model Fit Indices

Model Fit Index	Chi-Square (χ^2)	df	Absolute fit indicators			Incremental fit indicators					
			p-value of χ^2	CMIN/Df (χ^2/df)	RMSEA	CFI	GFI	AGFI	NFI	TLI	$\Delta\chi^2$
Standard value	Smallest		<0.05	<is 5	<0.05, <0.08	>0.95 great, >is 0.7 tolerable	Same	Same	> 0.90 > 0.7	> 0.95 > 0.7	

1st Output	945.2	383	0	2.47	0.073	0.881		0.81	0.77	0.817	0.865	
Adjusted	827.3	380	0.00	2.17	0.065	0.905		0.832	0.795	0.840	0.892	117.9

The following figures (4.1), (4.2), (4.3), and (4.4) explain in detail the SEM model tested for the study.
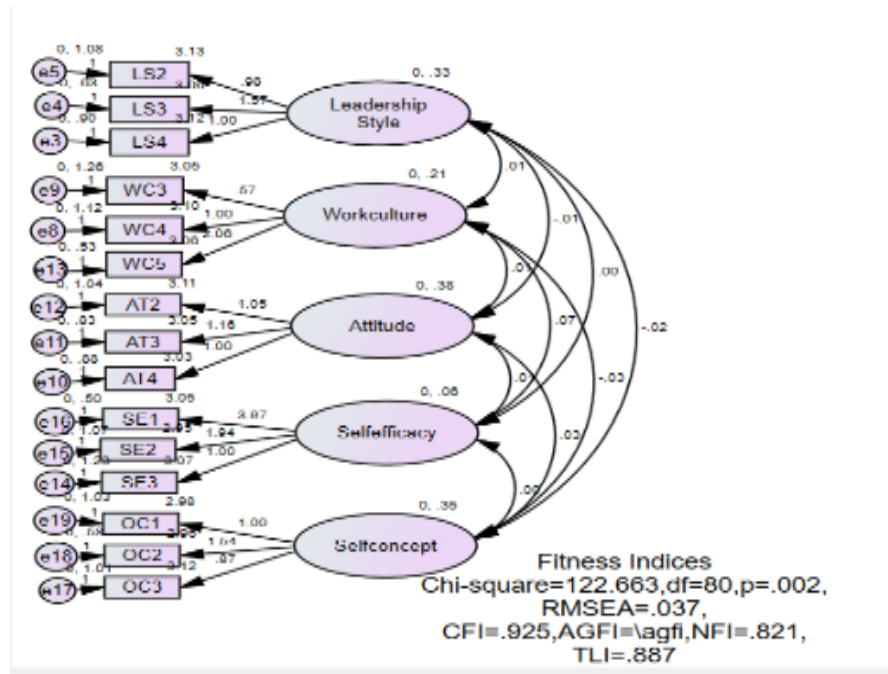

Figure 4.1 Correlation among the Factors tested.

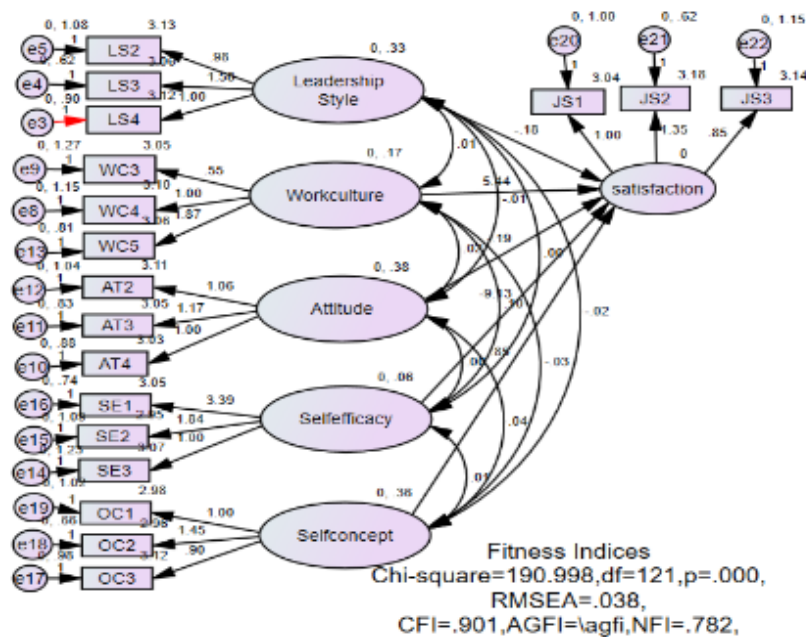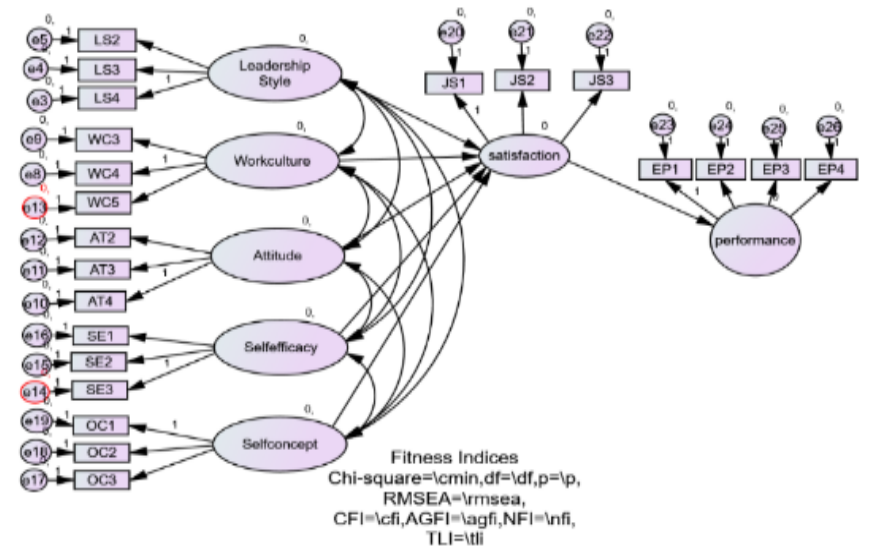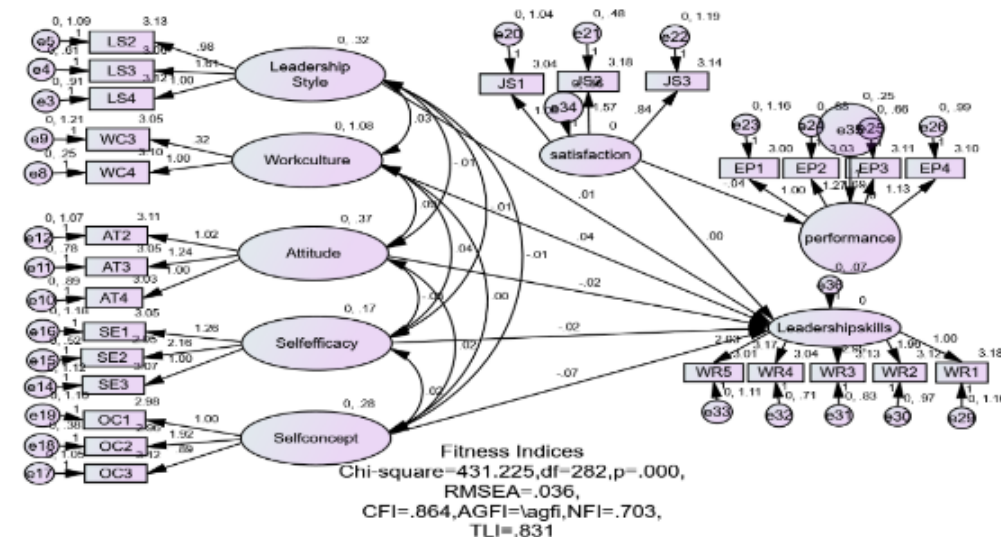Sources: Author`s own construction.

Fig 4.2: Correlation among the Factors tested concerning satisfaction.

Sources: Author`s own construction.

Fig 4.3: Correlation among the Factors tested concerning satisfaction and performance.

Sources: Author design

Figure 4.4 Correlation among the Factors tested concerning satisfaction, performance and leadership skills

Source: Author`s own creation.

Table9: Variables tested with SEM.

Variables		Unstandardard coeft	S.E.	Standardid coefficient	t value	p value
QESS	<--- Leadership`	0.46	0.07	0.20	6.8	**

QESS <--- Work Culture`	0.25	0.07	0.10	3.4	**
QESS <---Attitude towards Job	0.48	0.08	0.19	6.0	**
QESS <--- `Self-Efficacy	0.28	0.07	0.11	4.0	**
QESS <--- Participation	0.41	0.05	0.26	9.2	**
QESS <--- Self Conception	0.50	0.08	0.18	6.6	**
QESS <---Perception	0.54	0.13	0.12	4.1	**
Satisfaction <--- QESS	0.10	0.01	0.53	9.7	**
Performance <--- Satisfaction	2.32	0.25	1.5	9.4	**

Source Author compilation

The coefficient for the `Leadership Style` is 0.463, which denotes fractional consequence of perception on QESS. The projected constructive indication suggests that QESS would surge by 0.463 items for every itemrise in leadership styles and substantial at 5% level; organization culture at 0.246.

IV. CONCLUSION

The school leaders have powers to shape the followers adhere to the mission and vision of the institutions. The leadership style can lure the followers by generating suitable conditions to accomplish the objectives of the institutions. In the same vein, the educational leaders can create a positive and appropriate atmosphere through the application of the right leadership styles to enhance the culture, the followers' Attitude to the Job, Occupational Self-efficacy, follower's participation in non-worked related activities, followers' attitudes and followers' perceptions. Usage of the appropriate leadership style can overcome the hurdles, and finally, it can motivate the followers to perform better to improve educational achievement and performance.

Limitations and Future Directions

There is slightly higher participation of school leaders and educators from Private Secondary Schools (PSS) as compared to State Secondary Schools (SSS), and the willingness of the involvement of the school leaders and educators for interviews is very low. Understanding the effect of trust and commitment in the educator-school leader relationship to increase quality education might take a long time. The responses collected from educators and educational leaders from private secondary schools and public secondary schools. Related studies would be conducted in testing more variables to authenticate further studies.

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