

# The Impact of School Climate on Academic Performance: A case of Ghanaian Schools

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## Abstract

One of the most important school factors required for effective teaching in learning is the school climate. The study sought to explore and explain the degree to which school climate factors contribute towards improved students' performance. A quantitative research design was employed for the study. Items of the survey questionnaire were based on questions from the both Inventory of School Climate (ISC) and the NSCC scale for school climate. Data was collated from of primary data from 500 students from 500 schools randomly selected across all ten regions in Ghana. Performance was measured using average performance of schools in WASSCE examinations for the year 2014. Data obtained during survey was entered into a SPSS statistical software, where missing analysis was conducted. Subsequently analyses using both descriptive and inferential methods were done. The Cronbach's measure of reliability estimated for the school climate construct was 0.774. The structural equation model was then employed to test the effects of climate on the performance of students in standardized examinations. Results from SEM analysis reveal the model of the study was confirmed as the data showed equivalence to model modifications  $X^2/DF < 3.00$ , GFI  $>.90$ , AGFI  $>.90$ , NFI  $>.90$ , TLI  $>.90$ , CFI  $>.90$ , RMSEA  $< 0.07$ . It was found that school climate had a positive and significant effect on the academic performances of students. It was also found that specific school climate factors that influence student performance in ensuring positive school climate. Based on the findings of the study it was recommended that school leaders and other stake holding bodies help promote cohesiveness among all members of their schools.

**Keywords:** School Climate, Senior High School, Structural Equation Model

## 1. Introduction

Ghana is a lower-middle-income country in Sub-Saharan Africa that recognizes the need to improve access to quality basic education. The nation's commitment to education is reflected in its policies and investment in education. Currently about 24% of Government expenditure is spent on education (MoE, 2013). Ghana's Education Strategic Plan for 2003 to 2015 laid out a number of policies to further improve access and quality of basic education. Focus of policies have increased provision of infrastructure, teaching and learning materials, improved teacher recruitment, preparation, and Compensation (MoE, 2013) however have ignored sustainable strategies which focus on the school climate in schools.

Although the huge investments made on major educational reforms have resulted in significant improvements in the Gross Enrollment Ratio (GER) GER and infrastructure in the SHS in the country (MoE, 2012), there remains a gap between government spending and educational learning outputs (Ankomah *et al.*, 2005, Gyamfi & Pobbi 2016) as performances in WASSCE at the SHS level in core subjects including Mathematics, Integrated Science and English, for almost decade now have left many worries on policy makers and all stakeholders of education. For example a recent statistics by the West African Examinations Council (WAEC) show that of 242, 162 candidates who sat for the 2014 May/June West African senior school Certificate Examination (WASSCE), only 68, 062 representing 28.11 per cent obtained grade A1 to C6 in at least six subjects including English Language and Mathematics (Core).

Researches by Schlechty (1997) and DuFour and Eaker (1998) pointed out that focusing of structural changes in schools without addressing the school climate and organizational health of schools will fail to yield the expected results. Research in the western world have consistently trumpeted the importance of school climate toward improving the effectiveness of education. Major school climate reforms have already advanced in these nations as they believe an appreciation of this school context variable is a sustainable, school improvement strategy (Thapa & Cohen, 2013). This according to Thapa and Cohen (2013) was largely informed by data from more than a decade of school climate research.

Although school climate appears to be a major component of school effectiveness reform elsewhere, the

subject has received very little attention in Ghanaian literature on educational effectiveness. A review of school effectiveness research which explored the causes of the dwindling fortunes of the standard of education including Tete-Enyo (1997), Dankwa (1997), Adu-Yeboah (2002), Ankomah *et al.* (2005), Adadzi (2006), Baba (2012), and Kor and Opare (2017) accentuate the dearth of literature on the importance of school climate toward improving school effectiveness. Kor and Opare's (2017) posit that most researches in Ghana have only identified areas in the economy including the general state of the economy, poor infrastructure, inadequate equipment and the disparate location of some of the schools, and the unwillingness of most teacher trainees to accept postings to the most deprived areas as the causes of the problem (Dankwa, 1997), quality of teachers, student-teacher ratio, and efficiency of supervision, emphasis on rote learning, outdated curricula, shortages of textbooks and other materials as issues that contribute to the poor performance in schools and thus failed to provide empirical evidence to prove the positive contribution of school climate towards improving the academic performances of students.

Although debate still remain in literature elsewhere with regard to the impacts of school climate on academic performances, DuFour and Eaker (1998) have argued that educational reforms will fail to improve student achievement in schools if they fail to adequately address the importance of the culture and climate of schools. There is therefore a need to give attention to research that investigate the additional impacts school climate can be vital towards improving the educational quality.

## 2. Statement of the Problem

Concerns have been raised over the gap in educational achievement and government investment in education. Commitment by the government of Ghana and donors agencies towards the attainment of universal access to pre-tertiary education and ensuring the provision of quality education is evident in substantial budgetary and financial investment. For example (MoE, 2012) reported an increase in education expenditure from 5.3% in 2008 to 6.1% in 2011, after the rebasing of the GDP in 2010. Although these reforms have contributed to the rise in Gross Enrollment Ratio at the primary level from 83.3% in 2004 to 96.5% in 2011 (MoE, 2012), they have not translated into the attainment of quality education for which they are targeted (Gyamfi & Pobbi 2016). Academic performance of student at the senior high level especially in Mathematics, Integrated Science and English for the past few years have been reported to be on the decline (MOE, 2017).

Researchers in their quest to finding out the causes of the dwindling fortunes of the standard of education, only identified areas in the economy such as: the general state of the economy, poor infrastructure, inadequate equipment and the disparate location of some of the schools, and the unwillingness of most teacher trainees to accept postings to the most deprived areas as the causes of the problem (Dankwa, 1997), quality of teachers, student-teacher ratio, and efficiency of supervision, emphasis on rote learning, outdated curricula, shortages of textbooks and other materials (Adu-Yeboah, 2002); Ankomah *et al.*, 2005). These studies conducted so far in Ghana, although relevant, have failed to identify the impact that an improved school climate can have on the academic performances of students.

Researchers including Sarason (1996) and DuFour and Eaker (1998) have reiterated structural changes made to improve schools without addressing the culture and organizational health of schools have predictably not been successful. School climate is very important toward learning process in every school and will be necessary to consider to bring the expected transformation in academic performances. According to Hoy and Tarter (1997), Schools that lack conducive climates also lack an effective leadership and both teachers and students are academically motivated in poor schools and thus academic achievement is not highly valued. Though it is known that the school leader transforms the school culture or climate the question remains on how this can be done. This study is thus guided by the prior question, what aspects of school climate should the schools address in order to maintain a conducive school climate? And to what extent does school climate affect students' academic performance in Ghanaian senior high schools?

## 3. Research Objective

The General Objective of the research is to extend on the general body of knowledge and research work in the area of school management. More specifically, the paper seeks to:

- Investigate specific school climate conditions needed for improved performances within schools.
- Determine the impact of school climate on the academic performance of students.

#### 4. Review of Relevant Literature

School climate often referred to as school culture is the set of internal characteristics that which influence behaviours of members in the school and also help make a distinction among schools (Hoy, 1990). Hoy and Feldman stated that even though there exist a real conceptual distance between culture (shared norms) and climate (shared perceptions) this difference is small (Hoy & Feldman, 1999) thus culture and climate have often been described as overlapping concepts by theorists (Miner 1995). Hoy (1990), Heck and Marcoulides (1996), however, throw more light as they explained that often the climate is viewed as behaviour, while culture is seen as comprising the values and norms of the school or organization. Hoy and Feldman (1999) explained climate as having fewer abstractions than culture (more descriptive and less symbolic) and concluded that climate presents fewer problems in terms of empirical measurement hence climate is the preferred construct when measuring the organizational health of a school. The relationship between culture and climate was supported by McDougall and Beattie (1998).

School and classroom climate dimensions for decades now have been assessed through structured inventories that ask participants to indicate the extent to which they agree or disagree with specific statements about the social environment. Scale scores are computed by summing or averaging responses to the items that comprise a dimension. The notion of school memories as dichotomous that is either good or bad has led to the perception or classification of school climate as being one-dimensional. In a study by Trickett and Moos (1973), an influential conceptual framework was proposed, suggested that classroom climate assessment should rather address three overarching conceptual dimensions: Relationships, Personal Growth or Goal Orientation, and System Maintenance and Change. These assessment dimensions were upgraded later by other researchers who in addition developed several assessment instruments which could be used to assess school and classroom climate dimensions. Standard instruments include the Environment Inventory (EI) (Fraser, Anderson, & Walberg, 1982) for secondary level classrooms, Inventory of School Climate (ISC) (Brand, Felner, Shim, Seitsinger, & Dumas, 2003), National School Climate Center (NSCC) scale. Studies afore mentioned highlight the importance of four key dimensions in the assessment of school climate. These are: Teaching and Learning, Safety, Relationships and the external environment (Brand *et al.*, 2003). A revised version of the NSCC (1996) scale adapted in the study to assess the school climate latent construct. Revision of items was to allow items reflect the population of study and this was done based on information gathered during interviews with experts and the pilot study.

Freiberg (1999) in their study posited that school climate as the heart and soul of the school and the essence of the school that draws teachers and students to love the school and to identify themselves with it. The view was further emphasized by Wang *et al.* (1997), in a meta-analysis study performed. They found that school culture and climate were among the highest influential factors which affect student achievement. Several studies in developed nations have shown that school climate is relevant toward improving on academic achievement. Correlational studies including Sherblom, Marshall and Sherblom (2006), Sterbinsky, Ross and Redfield (2006), and MacNeil, Prater, and Busch (2009), which focused on middle schools, found significant relationships between school climate and academic achievement. These studies were all conducted in developed countries and the research believes school will be worth investigating within a developing world context as climate. Busch *et al.* (2009), McLean *et al.* (2005) who stated that not all aspects of the school climate measures significantly influence student achievement therefore a need for context specific studies.

The role of school leadership in ensuring positive school climate is also mentioned in literature. Deal and Peterson, (1999), Leithwood (1992), Hoy (1990) have reiterated that the roles of school leaders influence every part of the educational setting and create an environment for the exchange of social and professional ideas. Without appropriate leadership the school climate will be negatively affected. Hoy (1990) clearly mentioned that studies have shown that schools that promote appropriate leadership and collegiality provide a climate more conducive to student success and achievement. An empirical study by Kor and Opere (2017) explored the role of headteachers in the management of relevant school climate factors needed for improved students' academic performance. An exploratory mixed design approach was employed. The qualitative phase involved interviews with forty two (42) headteachers and the second quantitative phase involved collation of primary data from SHS students and teachers randomly selected from 500 schools across the nation. Academic performance was measured using average performance in WASSCE examinations for the year 2014. A correlational study was then conducted to investigate how headteachers' roles influences the availability and School Climate. It was found that the role of headteachers in ensuring positive school climate directly influence influences school climate. The researchers noted that some key underlying indicators head teacher used in measuring of the sound environment included the Support for Learning, Interpersonal Relationships and classroom environment. Although the researchers provided a significant insight into how headteachers or school leaders can improve

school climate conditions towards improved academic performance, the study did not measure the extent to which school climate impacts child academic performances which the current study seeks to address

## 5. Research Methods and Design

A quantitative design was found to be appropriate for the study. The population of study consists of 535 public Senior high schools (MOE, 2013) at the time of the study. The minimum required sample size was statistically determined using Yamane (1967) and Nwana (1992) recommendation to be 246. Primary data was collected with a reliable survey questionnaire from 500 students from 500 public schools across all ten regions in the nation. Reliability of both interview guide and survey questionnaire were ensured by the researcher. In ensuring the reliability of the survey instrument items of the initial selected were adapted from the Inventory of School Climate (ISC) (Brand, Felner, Shim, Seitsinger & Dumas, 2003), and the NSCC scale for school climate. This was because these instrument were known to be valid and standard instrument to assess the school climate condition towards improved academic performances. The questionnaire was then pretested in selected schools within Accra. Revision of items was made to obtain the reliable survey instrument. Permission was sought from the Education directorate and from head teachers of sampled schools by means of letters from the researchers university. Data collection personnel explained the purpose of the research to participants. Students expressed their level of agreement using a five point Likert scale ranging from 5 – strongly agree to 1 – strongly disagree. Performance data used was the average scores in Mathematics, English, Integrated Science and Social Studies for the 2013/2014 WASSCE academic year. Data obtained during survey was entered into a SPSS statistical software, where missing analysis was conducted and the test for normality was conducted. Subsequently analyses using both descriptive and inferential methods. The main inferential analysis tool employed in the study was the Structural Equation modelling using the Confirmatory Factor analysis approach.

## 6.0 Presentation and Analysis of Results

### 6.1 Reliability Testing

The reliability of survey items is critical in measurement and subsequently on the analysis of obtained primary data. A measure of the reliability of items for each latent constructs of the study permits us to determine whether the measured items in a scale were all measuring the same underlying construct. In the present study the reliability of the survey items were determined using the internal consistency Cronbach's coefficient alpha. The higher the Cronbach's coefficient alpha, the more reliable the scale. A coefficient of 0.75 according to Hair *et al.* (2009) is a satisfactory criterion for a reliable and valid research instrument. The Cronbach's Co-efficient Alpha ( $\alpha$ ) values for the construct is presented in Table 1.

**Table 1: Internal Consistence measures and the number of measurement items**

Construct	Cronbach's $\alpha$	Number of Items
School Climate	0.774	10

Source: Survey Data

Result from analysis reveals an acceptable value for items of the School Climate construct. The finding confirms significant amount of consistency among measured items hence suggesting that items reliably measured the construct.

### 6.2 Missing Value Analysis

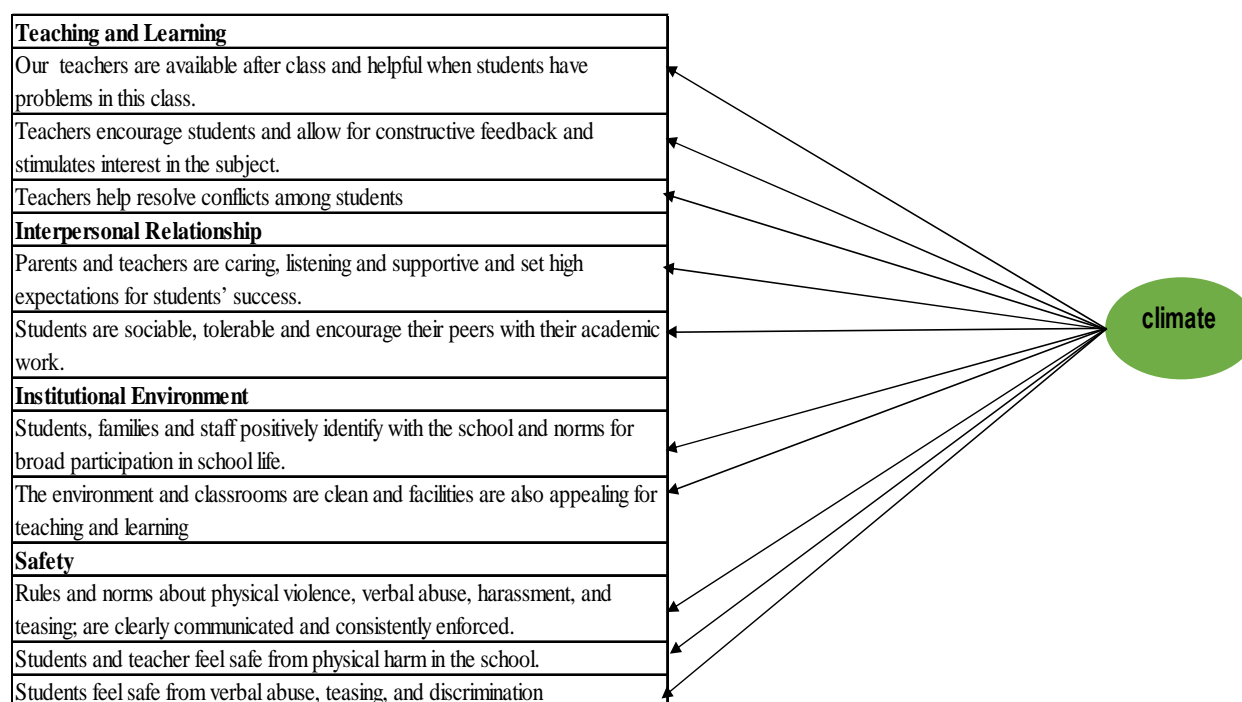
A requirement for SEM is for the data to be complete. When data contains missing responses results of the SEM are affected. It is therefore a requirement that missing data is treated for further analysis. Data was hence examined for missing values. This involved analysis of the number and percentage of data with missing responses, followed by analysis for patterns of missing data. The final step involved the treatment of missing values using the Full Information Maximum Likelihood estimation (FIML), recommended by Enders and Bandalos (2001) to allow for subsequent analysis.

The missing value analysis was conducted for all 10 measurement items used in the model (Table A1 in Appendix). All items had some number of missing values however the highest percentage of missing values 1.9% was far below the 10% a minimum requirement for estimation. No pattern to the missing responses was

identified hence missing data was missing at random. The multiple imputation procedures, generated through the SPSS program (SPSS version 21), were used to replace missing responses.

### 6.3 Confirmatory Factor Analysis (CFA)

A Confirmatory Factor Analysis was employed to validate the conceptualization of latent factor school climate, thus addressing the first research objective of the study. The conceptual model was tested empirically using data gathered during the survey. A summary of the relationships among measurement items with constructs and relationships among constructs is presented in figure 1.



**Figure 1: The measurement model for the school climate construct**

Estimation of parameter in CFA is based on the sample correlation matrix obtained from the survey data. The sample correlation matrix used in the analysis is presented in appendices. Estimation of model fit is done using SPSS AMOS software. A critical step in CFA is the evaluation of model fit indices. The model fit measures of the empirical model was evaluated in using of the GFI, TLI and the CFI measures of fit; the statistical significance of the estimated coefficients, squared multiple correlation coefficient. Table 2 presents the standardized regression weight of factor loadings of each measure item for each construct. The statistical significance of coefficients is evaluated in terms of the results of a hypothesis test with the null hypothesis that the true coefficient is zero using a significance level of 5%. The coefficients of measurement items which are also known as the factor loadings of items estimated during CFA are presented in table 2.

The Standardized regression weight in table 2 also known as the factor loading gives a measure of how much increase in standard deviation will be experienced for a unit standard deviation rise in the endogenous variable. Result from analysis show that all measurement items had significant factor loadings. This was evident as the p values indicates that the null hypothesis that measurement items were not relevant is rejected at the .001 level of significance. A number of measured items of the construct satisfy the requirement of 0.5 for the factor loading suggesting that the construct is relevant in explain significant amount of variability in such items. This finding generally imply that school culture/climate in Senior High School can be measured via a number of these climate items considered.



**Table 2: Estimated Regression weights of items during Confirmatory factor analysis**

CONSTRUCT MEASURES	AND		Coefficients		Stand Error <sup>b</sup>	Probability <sup>y</sup>	SMCC <sup>d</sup>
			Unstandardized	Standardized			
<i>School Climate</i>							
Q1	Teacher_available	<---	Climate	1	0.511		0.261
Q2	Teacher_encourage	<---	Climate	0.748	0.548	0.088 ***	0.3
Q3	Conflict_resolve	<---	Climate	0.612	0.497	0.077 ***	0.247
Q4	High_expectations	<---	Climate	0.857	0.498	0.107 ***	0.248
Q5	Peer_encoragement	<---	Climate	0.853	0.481	0.109 ***	0.232
Q6	Identity	<---	Climate	1.011	0.682	0.105 ***	0.465
Q7	Clean_environment	<---	Climate	0.977	0.499	0.122 ***	0.249
Q8	Rules_enforced	<---	Climate	0.849	0.444	0.115 ***	0.198
Q9	Safety_physical	<---	Climate	1.027	0.495	0.129 ***	0.245
Q10	Saftety_decrimination	<---	Climate	0.981	0.5	0.122 ***	0.25

*Notes: a. The symbol \*\*\* indicates that the null hypothesis is rejected at the .001 level of significance. b. SMCC = Squared Multiple Correlation Coefficient c. TLI = Tucker-Lewis index, CFI = Comparative Fit Index, GFI = Goodness of Fit Index*

The largest standardized regression weight at the 5% level of significance was observed for (Identity<---climate = 0.682, p value = \*\*\*). The result suggest that When School Climate goes up by 1 standard deviation, identity goes up by 0.682 standard deviations. The result implies that students perceived that a relevant indicator of sound climate in schools is the fact that *Student identify themselves with the school. The next* indicator of quality tuition in schools is the fact that *Teachers encourage students and allow for constructive feedback and stimulates interest in the subject [Q11]*. This is indicated by a high standard regression weights were also observed for *prepare well for class and address all questions from students properly* (teacher\_encourage <---Climate = 0.548, p value = \*\*\*). Another measurement item, *my instructor is available after class and helpful when students have problems in this class [Q10]*, were also identified to be significant indicators of School Climate. This was evidence in estimated standardized regression weight of (teacher\_available <---Climate = 0.511, p value = \*\*\*). The remaining items for had standardize regression weights close to 0.5. Further investigations during the path analysis was conducted to determine the relevance of such items to the construct.

The measures of fit for the GFI, TLI and the CFI are evaluated in the context of suggested minimum threshold values of .9 (Hair *et al.*, 2009). Table 3 presents the results of the confirmatory factor analysis (CFA) for the measurement models of all constructs.

**Table 3: Measures of Model fit for Empirical model during Confirmatory Factor Analysis**

Model	CMIN	DF	P	CMIN/DF	GFI	AGFI	TLI	CFI	RMSEA
Default Model	233.911	35	0.000	6.683	0.896	0.836	0.881	0.907	0.110
Five items deleted	20.205	5	0.001	4.041	0.983	0.949	0.961	0.98	0.080
e8<-->e10	9.179	4	0.0057	2.295	0.992	0.972	0.983	0.993	0.016

The CMIN is the measure of discrepancy in the data for the given model. The test of significant for default model (CMIN,  $X^2 = 233.91$ , p value = 0.000) suggest the expected results of the default model will differ significantly from the observed information. Another recommend measures of discrepancy, the ratio of the chi square to the degrees of freedom,  $X^2/df = 6.683$  still suggested a poor fitted model.

As suggested earlier five items had estimated factor load below the recommended 0.5 threshold hence based on the recommendation of Hair *et al.* (2006) the items were deleted and the measures of fit of the CFA model reestimated. The estimated measures of fit with five items deleted is presented in table 3. Measures of fit increased significantly. This is evident in a decrease in the ratio of the chi square to the degrees of freedom,  $X^2/df = 2.295$ , and increase in the Goodness of fit index, GFI = 0.992 and the adjusted goodness of fit index, AGFI = 0.992. The TLI and CFI also exceeded 0.95. The values of all measures suggested that model fit is acceptable. One modification is made as errors of Q8 and Q10 were made to correlate. This was done since researcher assumed that a communication of high expectations of school with all parties within the school community is associated the identification of students with the school.

#### 6.4 Effect of School Climate on Academic Performance

In SEM, path analysis involves including causal effects of one or more factors on other factors. This section aims to establish a full model showing paths from the one exogenous latent constructs confirmed during the CFA to an endogenous variable academic performance. The full model seeks to first investigate the direct effects of the school climate construct on academic performance of students in standardized examinations. The path represented by directed arrow in the full model indicate causal relationships. A summary of the full model to be tested is shown in figure 2.

The path of the full model serves as the underlying structure to tests the formulated hypothesis:  $H_{02}$ : *School climate condition has significant impact on academic performance of students in standardized examination*, thus addressing the second objective of the study. The full model was similarly tested using data from the survey. The fit of the full model was then assessed in terms of the Chi Square with the corresponding P-value, the Root Mean Square Error of Approximation (RMSEA) (Hair *et al.*, 2006). In addition to RMSEA, incremental fit indices including the Goodness of fit test index (GFI) and the Comparative fit index (CFI) are utilized for fit evaluation in this study. The estimates of relationships between the measurement items and underlying construct and its' effect on performance together with their corresponding probability values are estimated from SEM analysis using AMOS 23 are presented in table 4 and 5.

Results in table 4 reveal that the Goodness of fit measure, GFI = 0.925 and the Adjusted Goodness of fit measure, AGFI = 0.906 both exceeded the minimum threshold of .9. The other absolute fit measures, all exceeded the threshold value of 0.9; TLI=0.945, CFI=0.952 suggesting a good fit. Finally, the RMSEA= 0.054 comfortably lies below the suggested maximum threshold of .08 which also suggest that model fit is good. All measurement items confirmed from CFA remained significant during SEM.

All unstandardized and standardized regression weights remained significant in the final path analysis (table 5). The estimated model parameters include the effects of each of the three constructs on the mean performance of pupils. Specifically effect of exogenous variables are analysis is provided by the estimated standardized regression weight.

**Table 4: Measures of Model fit for Empirical model during Path Analysis**

Model	NPAR	CMIN	DF	P	CMIN/DF	GFI	AGFI	TLI	CFI	RMSEA
Default Model	33	134.353	72	0	1.866	0.96	0.942	0.946	0.957	0.043
Saturated model	105		0			1			1	
Independence model	14	1551.27	91	0	17.047	0.558	0.49	0.00	0.00	0.185

Source: Survey data

Source: Survey Data

**Table 5: Model fit Measures, Regression Weights and probability values form SEM analysis**

CONSTRUCT AND MEASURES			Coefficients		Standard Error		Probability
			Unstandardized	Standardized	C.R.	P	
teacher_avail	<---	Climate	1	0.609			
teacher_enc	<---	Climate	0.997	0.748	0.082	12.161	***
conflict_resolve	<---	Climate	0.96	0.745	0.079	12.127	***
high_expectations	<---	Climate	1.084	0.684	0.094	11.476	***
Identity	<---	Climate	0.936	0.709	0.08	11.755	***
Average Performance	<---	Climate	2.727	0.162	0.959	2.843	0.004

*Notes*

d. SMCC = squared multiple correlation coefficient

(TLI = Tucker-Lewis index, CFI = Comparative fit index, CR = Construct reliability, VE = Variance extracted)

School Climate was found to have a significant positive effect on the average performance (*effect* = 0.162, p value = 0.004). The positive sign of the estimated weight indicates that increase in management of the school climate will lead to better performance.

Result above hence suggest that all factors considered in the model have significant contribution towards the performance of students in the standardized examinations. A finding which leads to several practical ad policy implications. A summary of model estimates is presented in figure 2.

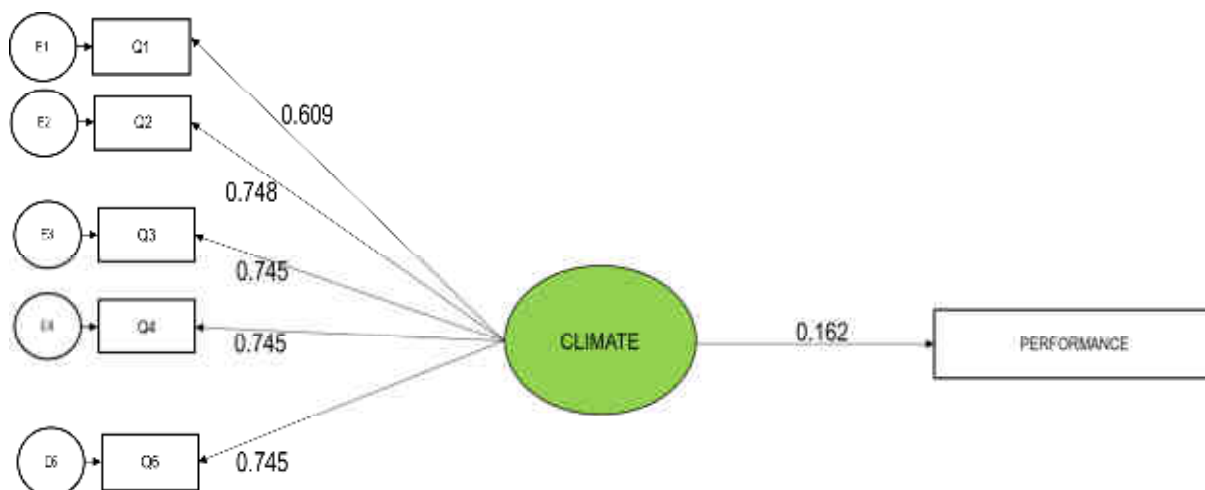


Figure 2: The Empirical model of Parental Involvement and Performance of Pupils. Model shows all significant paths estimated from primary data form survey using Structural Equation Modelling

**7. Recommendations**

The first objective of the study sought to investigate the aspects of school climate which are relevant for improved performances using a confirmatory factor analysis. It was found that the school climate construct provide significant aspects of school climate which can improve performance in schools. These were:

- Students, families and staff positively identify with the school and norms for broad participation in school life.
- Teachers encourage students and allow constructive feedback and stimulates interest in the subject.
- Parents and teachers are caring, listening and supportive and set high expectations for students' success.



- Teachers help resolve conflicts among students
- Teachers are available after classes and helpful when students have problems in their classes.

Very little has been mentioned on the aspects of the school climate necessary for improved academic performance in schools. The study, hence adds up to knowledge as it fill up a gap in various studies on the school climate. The finding also suggest that not all dimensions of the school climate affected student performance in standardized exams. This finding was also in line with studies of (Busch et al., 2009; McLean *et al.*, 2009) who stated that there are specific aspects of the school climate that significantly influence student achievement.

The first finding above practical imply the following:

(i) that one of the most important actions that a principal initiates within a school setting is to promote cohesiveness such that students, families and staff positively identify with the school and norms for broad participation in school life. The finding also suggests the need for school leaders to ensure communication flow among all parties within the school environment as well as with parents of students and other stakeholders of education. Communication of school expectations and norms to parents is one of the ways of encouraging the active participation of parents towards the education of their wards. With regards to cohesiveness with teachers and other staffs (Leithwood *et al.*, 2004) mentions that when the principal supports clear goals for the school that are accepted and supported by the staff, then his/her leadership influence will cause a healthy organization.

(ii) in order to ensure a conducive and productive climate, the school principal should ensure that teachers encourage students and allow for constructive feedback in order to stimulate interest in the subject. Encouragement and constructive feedbacks are needed for a positive climate. The finding was a confirmation of views expressed by Headteachers. The urgent need for Headteachers to ensure that teachers allow for student feedback and stimulate interest in their courses is timely for the transformation of a positive climate which will result in better academic performance.

(iii) that school leaders focus attention on setting high expectations and also communicates these expectations to both teachers and parents and secondly ensure that students are involved in the process achieving institution goals. A transformational leader much most of all have a vision for the institution and such vision should be shared vision with followers. Such a leader inspires followers hence they collaborate toward meeting expected goals of the institution. School leaders must also pursue a school climate where there will be dialog among students and School leaders and teachers, such as SRC meetings so that problems of students can be addressed. It is no doubt that such dialog will make students feel respected and desire to press for excellence.

(iv) that school leaders and teachers to focus attention on proper conflict management within the school community. It is not surprising to observe that conflict resolution is relevant in defining the school climatic condition. The current decline in performance has paralleled the recorded incidences of conflicts within the secondary high schools in the last decade hence suggesting a negative relation between these two variables. Conflict may have a negative effect on institutional performance depending on the nature of the conflict and how it is resolved (Armstrong, 2009). When conflict are not resolved in an institution it leads to low productivity of that institutions. Conflict undermine the harmony of the school climate and can prevent some students from learning.

The second objective sought to assess the extent to which school climate/culture affect students' academic performance. It was found from the empirical model reveals that the school climate has significant effects the academic performance of students in standardized examinations. The findings of the study are in line with works of researches including Sherblom, Marshall and Sherblom (2006), Sterbinksky, Ross and Redfield (2006), and MacNeil, Prater, and Busch (2009) on the impact of school climate on performance.

Dwelling on the practical implication of the results, the positive sign of the estimated weight indicates that increase in management of the school climate will lead to better performance. Educational reforms over the years have been targeted at improving infrastructural and number of enrolments in schools. These efforts of policy-makers to improve education in Ghanaian schools have not yielded the expected results. There is a need for education leaders review and refocus their leadership efforts so fill this gap. Schlechty (1997) suggested that structural change that is not supported by cultural change will fail because it is in the culture that any organization finds meaning and stability. The finding of the current study also point to the fact that the school climate condition is critical towards the expected academic performance. Hence to transform investments into academic performance policy makers will need to pay attention to efforts which will promote the climatic conditions of the school. The finding of this study is therefore relevant towards answering and filling the gap between reforms and the expected quality of education in the Senior High Schools. The empirical impact of school climate also highlight the need for Headteachers to make substantial efforts towards improving the school climate so as to improve on the poor performances observed over the years.

## 8. Conclusion

The primary focus of the study was to determine the impact of school climate on the performances of students in standardized examinations. The findings of the study reveal that school climate does significant impact on the academic performance of students. Policy makers thus need to strategically implement policies targeted at improving school climate, as school climate can become a sustainable strategy for improving educational outcomes in Ghanaian schools.

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