

RELATIONSHIPS BETWEEN SCHOOL CLIMATE AND STUDENTS' ACADEMIC ACHIEVEMENT IN KSCE EXAMINATIONS: A CASE OF KISII COUNTY-KENYA

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ABSTRACT: *There are different types of school climate that impact student performance. These include positive and negative climates. A school climate which is positive allows students to perform better as it supports students morally, physically as well as academically. Whereas negative school climate cannot bring about school improvement and enhanced school effectiveness and entails that the school is poor or lacks physical resources, interactions is poor, or learning does not take place smoothly. The school which is having a positive climate fosters learning to take place and while the school which has negative climate impedes learning and hence students may develop tendency of disliking subjects. This study was guided by system theory by von Bertalanffy. According to von Bertalanffy the main task of general systems theory is to study the common aspects of systems and from this to formulate models, Principles and laws that apply to generalized systems and their sub-classes (Screerens, 2000). This study employed mixed research methods which utilized both correlational descriptive survey and case study designs. Stratified and simple random sampling procedures were used to get twenty (20) secondary schools. The instrument that were used in data collection included questionnaires, Structured interview schedule and observation guide. The analysis of data from questionnaires; observation guide and structured interview schedule were categorized, and entered into the computer for computation of descriptive statistics and inferential statistics. Descriptive statistics were analysed and presented in frequency tables and percentages while inferential statistics were presented by standard deviations and means to generate data that was used to test the hypotheses. Pearson's product moment correlation analysis was employed to determine whether there are significant relationships between the variables under study. Hypotheses' testing was carried out at 0.05 confidence level. Qualitative data was organized in themes and narrative. Findings revealed that sub-county secondary school face shortage of highly qualified and experienced teachers, teaching and learning materials, physical infrastructure, and incentives for students and teachers compared to county and National schools. The study recommended that teachers should strive to create a friendly classroom learning environment that is fovaurable for learning to take place, students should be encouraged to put their personal efforts in academic matters and the government should address teacher shortage and distribution in schools across all the counties.*

KEYWORDS: *School climate, Student academic achievement, Positive school climate, Negative school climate*

BACKGROUND OF THE STUDY AND STATEMENT OF THE PROBLEM

Education is seen as a tool of socio-economic development and the drive of change in different spheres, regardless of the increased number of secondary schools in Kisii county most of them still encounter problems such as good studying climate, competent teachers to facilitate students' learning, poor and insufficient buildings, insufficient desks, overcrowded classrooms, in adequate number of text books and poorly motivated teachers due to lack of supports from education system (Nyaigoti, 2011). School climate is an integral and essential component of the teaching and learning process in Kenya and the world at large. However in most of the schools, climate is not conducive (Nyaigoti, 2011). Most of the Secondary schools in Kisii County have poorly facilitated environments where there is an acute shortage of teaching and learning facilities, lack of enough classrooms as a result of increased enrollment and incompetent teachers. In order to attain education quality necessary inputs such as conducive academic environment, good quality of infrastructure, adequate teaching and learning materials, strong parental involvement, quality of students with adequate entry qualification, highly qualified and motivated staff as well as financing in which the government plays a major role, should be taken into consideration.

Generally, education sector cannot be improved if the climate of the Secondary schools and the students' academic achievement are not put forward. Hence School climate should be taken into consideration as it is a multi-dimensional and influences many individuals such as students, parents, School personnel and the community. It can impact significantly on the educational environment, owing to that a positive School climate is essential for students' success. There are different types of school climate that impact student performance. These includes positive (very favourable/ favourable) and negative (unfavourable/fairly favourable) climates. These types indicate that a school climate which is positive allows students to perform better as it supports students morally, physically as well as academically. Whereas negative school climate cannot bring about school improvement and enhanced school effectiveness and entails that the school is poor or lacks physical resources, interactions is poor, or learning does not take place smoothly. The school which is having a positive climate fosters learning to take place and while the school which has negative climate impedes learning and hence students may develop tendency of disliking subjects.

Many researchers and authors have identified the following characteristics of school environment, which may influences either negatively or positively on academic achievement of students. Positive characteristics includes: Involvement, satisfaction, self worth, social satisfaction, competence, (Academic achievement), intimacy, independence, enthusiasm, home work, teaching methods, acceptance problem structuring, cohesiveness, task orientation, teacher support, study habits, cognition, school environment, disengagement, friction, difficulty. Negative characteristics includes: Psycho-physical hindrance, alienation, apathy, formality, direction, diversity, reproving, lack of hope, control (Sunitha, 2005).

The negative characteristics impede learning and develop negative attitude and social emotional problems. Students develop withdrawal tendencies. A positive school climate has been found to be positively related to indicators of school success, such as standardized test scores, annual yearly progress (AYP) measures, and school report card information (DiStefano, Monrad, May, McGuinness, & Dickenson, 2007; Greenberg, 2004; Sebring, Allensworth, Bryk, Easton, Luppescu, 2006; Monrad, May, DiStefano, Smith, Gay, Mindrila, Gareau, & Rawls, 2008) as cited in South Carolina Educational Policy Center, (2009). These studies further suggest that, schools that have better climates are more effective at promoting the achievement with their students relative to schools with similar students and less functional climates.

A school climate is either positive or negative atmosphere of the School which can either fosters or hinders students both materially, morally, emotionally and psychologically; attitudes and values; interaction of the head of school and staff, teachers and students that may influence students' performance positively. Hence school climate under this study can be grouped into three areas such as physical, social and academic environment that enhance students' academic achievement. A positive school climate has been associated with fewer behavioral and emotional problems for students (Olatoye, 2004). Additionally, it is indicated that a positive, supportive and culturally conscious school climate can significantly shape the degree of academic success as experienced by most of secondary school students (Olatoye, 2004). Similarly, Cohen (2006: 201-237) insists that school climate reflects how the school staff feel about their work place and the way they work with others.

The study further sought to examine other variables like gender, year of experiences of teachers and the principal and their qualifications, type and location of Secondary Schools as well as the facilities which the Schools have including libraries, text books, supplementary materials and references, laboratory rooms with equipment in relation to their use and other infrastructure that support both advantaged and disadvantaged students and teaching staff to feel safe and cared. These variables will assist the researcher in examining the climate of School whether or not it has relationship with students' academic achievement in national examination.

A number of studies have been undertaken on school climate at various level of education. The study done by Lizzio & Simons (2002) investigated the relationship between University students' perceptions of their academic environment, their approaches to study and academic outcomes. The results indicated that student's perception as an influence in both "hard" (academic achievement) and "soft" (satisfaction, development of key skills), learning outcomes, both directly and mediated through their approaches to study perceptions of heavy work load and inappropriate assessment influenced students towards surface, the perceptions of good teaching towards deep, approaches to study, students perceptions of their current learning environment were a stronger predictor of learning outcomes at university than prior achievement at school. Barnes & Wet (2012) investigated the influence of school culture and school climate on Violence in schools of the Eastern Cape Province; it was found that 'the better the school culture and school climate are at a school, the lower the levels of school violence. On the other hand, a lack of school safety contributed to learners experiencing higher levels of violence at schools'.

Abdallah (2010) conducted a study on the teaching and learning environment in community secondary schools in Tanzania, and the findings revealed that the schools lack laboratories apparatus and specialized rooms for teaching activities, there are in-adequate teaching and learning materials such as syllabus which hinder the coverage of various topics and some of the schools still use the old version syllabus as results the knowledge students get is not the one which is required and hence perform poorly in the final examinations. The study was guided by the following research question

- a) What Climate exists in Kisii county Secondary Schools?
- b) What are the perceptions of students on the relationship between teachers' performance and the climate that exist in the School?
- c) Does the physical environment influence students' performance?
- d) What should be done to improve the school learning climate in secondary schools?

The study sought to test the following hypothesis

1. There is no relationship between the school climate and the academic achievement of students in Kisii county secondary schools.

Conceptual Framework

The study sought to give a prediction on the variables that shows relationship between school climate and student academic achievement in secondary school that may help students’ to improve their performance in an examination. This was demonstrated in figure 1 below.

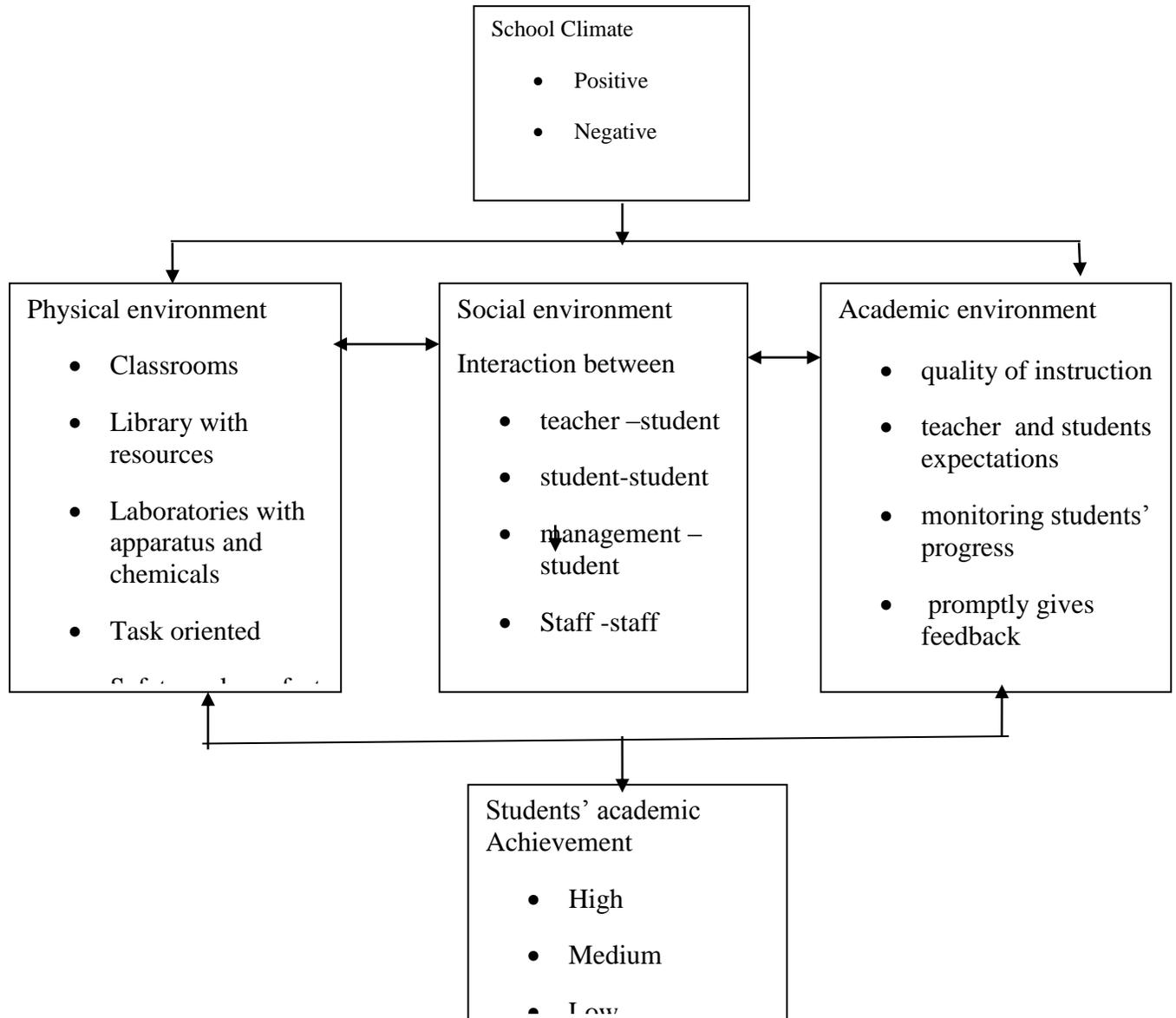


Figure 1. Integrated Conceptual framework of school climate and the associated variables that have relationship with students’ academic achievement.

Source: Modified from Screerens(2000)

From the conceptual framework in figure 1 above, it shows that a positive school climate comprises of very favourable physical, social and academic environment, and when all these are integrated together students' academic performance becomes better. Very favourable Physical climate is basing on orderly and classroom atmosphere such as organization of the class and availability of the resources, safety and comfort, quiet, task-oriented, students' discipline, school size and ratio of students to teachers and appearance of the school buildings and its classroom in general. Very favourable Social climate focuses on good relationship between student –student, student-staff, and student-management should also be maintained. Mutual respect and rapport is very important in secondary schools to be established as through this student feel relaxed, warmth and supportive as a results the student learn better and the performance will be improved.

Very favourable academic climate consists of quality of instruction, teacher expectations for all students' achievement, monitoring students' progress and promptly gives feedback to both students and parents. A Climate that meets student's expectation has positive effect on their performance. Schools should employ strategies that build up on students' success and this can be possible through setting challenging tasks that gives students chance to demonstrate their understanding. Closely monitoring and feedback once the lesson is undertaken are also important as student knows the right truck. Hence teachers should prepare well the lesson, create good learning atmosphere by being confident and knowledgeable to what they deliver to the class, respect and give support to different levels of abilities of the students in the class, the methods to be used in class should meet the learner' need and expectations. Moreover, teachers should encourage all students to succeed in their career subjects as it has great impacts on the final examinations.

METHODOLOGY

This study employed mixed research approaches due to the fact that the researcher wanted to utilize both quantitative and qualitative techniques to minimize weaknesses that stem from one approach. Correlational survey and Case study designs were used. The study was conducted in twenty (20). Stratified random sampling and simple random sampling were used to get the sample size that comprised of National schools, county schools and sub-county secondary schools. The study was conducted on 400 respondents. The study employed both primary and secondary sources of data. The data collections instruments for the study included questionnaires, interview schedule, and observation guide. The researcher conducted a pilot study on three schools in the neighbouring Nyamira County in order to validate the research instruments. The purpose of pilot testing was to discover any weakness in the instrument, check for clarity of the questions or items and also elicit comments from respondents that would assist in the improvement and modification of the instrument. Pilot testing was also to enable the researcher to detect any flaws in the administration of the research instrument. The study used both qualitative and quantitative methods of analysing data. Quantitative data from both questionnaires and classroom assessment form that was used for observation was categorized, coded and entered into the computer for computation of descriptive statistics and inferential statistics. The Statistical Package for Social Sciences (SPSS version 16) was used to run descriptive analyses to produce frequency distribution tables, percentages, means and standard deviations based on various characteristics of the respondents. Descriptive statistics was presented in frequency tables and percentages while inferential statistics was presented by standard deviations and means to generate data that was used to test the hypotheses. Pearson's product moment correlation analysis was used to determine if there is any significance relationship between the school climate and Student's academic achievement at 0.05 levels of significance. Qualitative data obtained from field observation, structured interview schedule and

questionnaire was categorised, organized into coherent themes and reported according to the research questions.

RESULTS AND DISCUSSIONS

The nature of the school climate in secondary schools

The study established that majority of teachers and students, in sub-county secondary school 236 (59%) suggested that existing school climate does not meet their needs on aspects such as meeting students expectations, enforcement of rules and regulations , fair administration of punishment and rewards, smooth classroom activities and maximum cooperation in the school. While 184 (46%) of the teachers and students from county and National secondary school suggested that the existing school climate to a great extent meet their needs. This was further triangulated through interviews with that sampled schools. Majority of the principals in the county and National schools maintained that they had a conducive school climate. One principal a national school said:

“It is a positive relationship because we call ourselves as a one family and member of this school where we can eat lunch together, solve problems together, and everyone is concerning of the other and this does not end here to the teachers only but also it cuts across to the all students and non-teaching staff at large”.

Another principal had this to say:

“It is a positive relationship due to the fact that, we have high cooperation in this school as every term we eat dinner together as the whole school community, we go out for tours including teachers, non-teaching staff and students. We have social gathering where each individual feels that is part and parcel of a school”.

\The findings of the study are in agreement with Barnes, & Wet, (2012) on the influence of school culture and school climate on Violence in schools of the Eastern Cape Province. The findings revealed that, the better the school culture and school climate are at a school, the lower the levels of school violence. On the other hand, a lack of school safety contributes to learners experiencing higher levels of violence at schools as a results the performance becomes poor. Kyriacou, (1995) & Olateye, (2004) argued that a positive school climate which has orderly atmosphere has been associated with fewer behavioral and emotional problems for students. Kisii County is unfavourable to both the learners and the teachers. This was attributed to the fact that most schools in the county have mushroomed in past decade with introduction of free secondary education and establishment of Constituency Development Funds (CDF) Schools. This concurs with observation made in the sampled schools which indicated that most of the sub- County and county schools lacked financial, human and infrastructural capacity to enhance a favourable school climate.

Perceptions of students on the relationship between teachers’ performance and the climate that exist in the School

Table 1: Distribution of students’ responses about their perceptions on school climate

Statements	SD		D		U		A		SA		Mean
	f	%	f	%	F	%	f	%	F	%	
Teachers are well prepared	3	1.9	14	8.8	10	6.3	77	48.4	55	34.6	4.23
Teachers hold my attention during lessons	2	1.3	10	6.3	13	8.2	91	57.2	43	27.0	3.65
Teachers are available for extra help outside of class	5	3.1	9	5.7	12	7.5	75	47.2	58	36.5	3.81
Most teachers do not know the subject matter they teach	66	41.5	67	42.2	8	5.0	12	7.5	6	3.8	2.21
Teachers involve students in instructional processes	4	2.5	8	5.0	7	4.4	92	57.9	48	30.2	3.78
There is good interaction in this school	19	11.9	18	11.3	11	6.9	87	54.7	24	15.1	3.75
Learning at this school is a waste of time	94	59.1	42	26.4	15	9.4	5	3.1	3	1.9	1.92
I will encourage my friends and relatives to study at this school	22	13.8	15	9.4	24	15.1	58	36.5	40	25.2	2.59

The data in Table 1 tends to suggest majority of the students have a positive perception of the school climate. As they identified aspects like teachers preparation, attention of learners during the instruction process, availability of teachers for consultation and teachers involvement in the instructional process to be existing in their schools. Majority of the students who took part in the study disagreed with statements which purported that most teachers do not know the subject matter they teach and that learning at school is a waste of time.

Physical environment that influence students’ performance

Table 2: Distribution of students’ responses on physical facilities and climate found in school

Statements	Poor		Fair		Good		very good		Excellent	
	f	%	F	%	f	%	F	%	F	%
The use of teaching aids	29	18	28.2	17.5	57	35.9	26	16.4	19	11.9
Latrines/toilets	28	17.6	39	24.5	44	27.7	34	21.4	14	8.8
Library	67	42.1	26	16.4	31	19.5	20	12.6	15	9.4
Classroom	11	6.9	27	17.0	53	33.3	39	24.5	29	18.2

Laboratories and chemicals	36	22.6	31	19.5	40	25.2	27	17.0	25	15.7
Recommended textbook	37	23.3	31	19.5	41	25.8	36	22.6	14	8.8

The findings in Table 2 tends to suggest that majority of the students who took part in the study indicated that teachers in their schools used teaching aids, classrooms readily available and most of them were in good conditions, laboratories were available in most schools and majority were in good condition. However according to the observation and interviews done in public and private secondary schools it was observed that most of secondary schools have laboratories although their conditions are not good. However, based on the observations made by the researcher Most of the laboratories had shortage of laboratory apparatus and chemicals that students could be used for practical activities. Additionally, to the schools that had laboratories with equipped apparatus and chemicals some of the chemical were out dated which hinders students in getting the correct results. As results of this most of the schools still do alternative to practical. Table 2 further tend to suggest that majority of the students who took part in the study agreed that there were poor latrines/toilets in most schools, conditions and availability of the school libraries were poor and that a number of schools had acute shortage of books that correspond with student enrolments. These findings are in agreement with what Fabuni et al. (2004) found out about Class size and students' academic performance in Oyo State of Nigeria. The study revealed that, school with a large class size and teacher-student ratio recorded poor academic performance while better academic performance is associated with small class size and low teacher students-ratio.

Suggestions for improvement on the school learning climate in secondary schools

The students, teachers and principals who took part in the study suggested a number of improvements in different spheres of the school learning climate such academic climate, social climate and the physical. Majority of the respondents suggested many strategies for considerations such as teachers should be prepared during classroom delivery process, teachers should improve their teaching skills, and students should be occupied with assignments and projects and feedback to be given in time. This clearly demonstrated that the nature of school climate is still wanting and it requires major paradigm shift if student academic achievement is to be realized.

Correlation analysis

Correlation analysis was used to establish relationship between variables. The Pearson's product moment correlation analysis was used to infer the relationship among variables. This method was used because of the measurement scale used in the questionnaire. It is clear in the results that all the variables are positively correlated to each other. School favourable climate and high academic achievement have a strong correlation (0.622, $p < 0.01$) followed by the correlation between unfavourable school climate and high academic achievement(0.596) the correlation between favourable school climate and medium academic achievement was moderately strong at 0.56. The other correlations between the independent variables were varied (0.1-0.5) a detailed correlation of the variables is presented in Table

Table 3: Pearson correlation of the study variables
Correlation

	Favourable school climate	Unfavourable school climate	High academic achievement	Medium academic achievement	Low academic achievement
Favourable school climate	1				
Unfavourable school climate	.134	1			
High academic achievement	.623**	.596**	1		
Medium academic achievement	.456**	.323*	.478**	1	
Low academic achievement	.128	.124	.216	.189	1

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

*Correlation is significant at the 0.05 level (2-tailed)

CONCLUSIONS

The study found out that of the secondary schools in Kisii County have unfavourable school climate which have impeded healthy interactions in schools hence resulting to poor academic achievement of learners in KCSE results. The study found out that of the students in secondary schools in Kisii County have positive perceptions of teachers despite the valid existence of school climate in various categories of secondary schools found in the County. The study established that there exist strong correlations between the school climate and student academic achievement in KCSE examination in Kisii County. The study established that a number of physical environments may be playing a significant role on influencing student's academic achievement such the use of teaching aids, availability of library, provision of textbooks and state of laboratories. In order to maintain a conducive school climate and high academic achievement of students, schools, teachers and even teacher trainees must meet minimum standards and strive to improve the school climate as a means of realizing their vision and mission. The study suggests that we need more studies on schools in Kenya to determine exactly the factors which influence school effectiveness, and to what extent they are the same or different to those identified in other places in the world.

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