School Climate and Student Academic Achievement in Edo State Public Secondary Schools

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Abstract

The study examined the impact of school climate on student academic achievement in Edo State public secondary schools. The concept of school climate is explained as the psychological environment or atmosphere that characterizes a particular organization or work place. The descriptive design was adopted for the study, the population of the study consist of one hundred and forty (140) schools in Edo South Senatorial district. The multi-stage random sampling technique was used in selecting the schools, the sample size consist of twenty-eight (28) schools representing 20 % of the population. The school was stratified according to local government areas. Two research instruments were used for the study; a questionnaire titled School Climate Questionnaire (SCQ) and a Checklist to assess students' academic achievement. The data obtained was collated with the use of descriptive and inferential statistical methods, mean and standard deviation was used to answer the research questions while pearson product moment correlation and t-test was used for analysing the research hypotheses. It was concluded that the situation of school climate and students' academic achievement are not the same in rural and urban schools, mixed and single schools, large and small school and old and new schools in Edo state public secondary schools. Recommendations such as principal and staff must work together as a team to create a good learning environment.

Reference to this paper should be made as follows:

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INTRODUCTION

Education is a very vital tool that is used in the contemporary world to succeed. In Nigeria, education is recognized as an instrument for individual and societal development. It has witnessed active participation by the government, non-governmental agencies, communities and private individuals.

The role that education is expected to play in a society is multi-faceted. It is expected to be the basic tool for nation building and development. In other to achieve this, training would be given to individual willing to acquire skills and values that will enable their development in the society. The major way of undergoing this training is through the formal education. The formal education structures of Nigeria are in three levels; primary, secondary and tertiary. Each level complements the other in terms of quantity and quality of outputs. According to the National Policy on Education the objectives of secondary education in Nigeria is to prepare the individual for useful living within the society and for higher education. Specifically, Secondary education should:

- Provide increasing number of primary schools with the opportunity for quality education, irrespective of sex or social, religious and ethnic background;
- Diversified curriculum to cater for difference in talent, opportunities and future roles;
- Provide trained manpower in the Applied Science, Technology and Commerce at some sub-professional grades;
- Raise a generation of people who can think for themselves, respect the views and feelings of others, respect the dignity of labour and appreciate these values specified under our broad national aims and live as good citizens
- Foster Nigerians unity and emphasize the common ties that unite us in our diversity;
- Inspire students with a desire for self–improvement and achievement of excellence, (Federal Republic of Nigeria, 2014).

School is an institution for educating students. It is an institution where teaching and learning processes are carried out by various participants who interact and relate with one another in a way that will ensure the successful realization of the goals of secondary education. These participants include principals; teaching and non-teaching staff, students and parents, their interaction and attitude are part of the school climate.

Climate is referred to as the feeling, character or personality of a formal and informal group features and factors in a work environment. Climate is said to affect efforts geared towards the goal attainment of a school negatively or positively. The climate of a school is said to be close or open. Marina and Hinjari (2008) identified six types of climates prevailing in schools such as open, parental, familiar, autonomous, close and controlled. Adeogun and Olisaemeka (2011) classified school climate in two forms, namely positive and negative. A positive school climate is seen as an accessible, co- operative, respectful, pleasant, approachable, supportive and highly motivational interaction among principal and teachers and students. A positive school climate improves student motivation and achievement. It has a positive impact on the mental and behavioural health of students including contributing to a decrease in risky behaviour and depressive symptoms and an increase in feelings of belonging. A negative school climate on the other hand is tied to multiple negative outcomes for students and has been shown to exacerbate harmful behaviour and diminish achievement. In a school where the head is domineering, authoritative and totally in charge of all activities in the school is characteristics by non-cordial interaction between the participants of the school such as teachers and non-academic staff including the principals.

School climate therefore as defined by Johnson, Steven and Zwoch (2007), is the psychosocial context in which teachers work and teach. School climate is a relatively enduring character of a school that is experienced by its participants, that the school (Hoy, 2011). Adejumobi and Ojikutu (2013) viewed school climate as the perception of the situation in which school personnel carry out their day to day activities. Two components identified from their definition namely school characteristics and school processes. School characteristics entail features of available facilities, school size, policies of the school, value system, norms, integrity, and recognition while school processes involve social organization of a school which include the principal leadership style, communication pattern, motivation, teachers morale and teachers participation in decision making. All these lead to increased academic achievement for the students.

Academic achievement is commonly measured by examination or continuous assessment but there is no general agreement on how it is best tested or which aspects are most important. Academic achievement represents the performance outcomes that indicate the extent to which a person has accomplished specific goals that were the focus of activities in instructional environments, specifically in school, college and university.

Lassiter (2005) looks at student academic achievement as referring to a student's strong performance in a given academic area. Students' academic achievement therefore is largely identified by a range of statistical indicators, which can be said to be the level of attainment of a student in an examination that is, how a student is able to demonstrate his or her abilities in an examination and in real practical life situations or work environment. The size, type, age and location of the school have been implicated in students' academic achievement.

The size of a school has a very important influence on students' academic achievement. Large student population tends to put more work on the teachers and consequently this is likely to have a negative effect on the academic achievement of the students. Secondary schools in Edo state seems to be increasingly large and complex as a result of large student's enrolment. The size of the school also determines the number of teachers and school facilities to be provided. It has been observed in the state that irrespective of the size of the school, most of the school lack teachers and other facilities that will cater for student interest and teachers, in the teaching and learning process.

The age of the school also plays an important role on students' academic achievement. Old schools tend to have adequate building standards, good facilities and structures that will promote the attainment of educational objectives. Old school such as, Idia College, Immaculate Conception College, Edo College, Edokpolor Grammar School, cannot be compared to new schools founded in the 1990s. Most of the old schools have good structures and are equipped with sound and experienced teachers. Parents and other stake holders in the societies prefer to send their children to old schools because of the past antecedence of their students' academic achievement. In addition to this, government give attention to their demand and most of them are located in urban centers.

The importance of school location on the achievement of student of public secondary school cannot be over emphasized. It is one of the potent factors that influence the distribution of educational resources. Bello and Ezeh (2008) opined that school location is known to influence the student learning through quality of teaching staff, class size and availability of infrastructure. Rural- urban location has been found all over the world to be an important indicator or difference in performance both for teachers and students academic achievement. Urban schools, located in towns enjoy social amenities like good road, electricity, pipe borne water and good means of transportation, with all these available will influence the academic achievement of the students. In the rural schools the lack of social amenities in remote rural area will result in opposite of what is obtainable in the urban areas.

The study therefore attempts to investigate if there is a relationship between school climate and students' academic achievement in public secondary school.

Concept of School Climate

The concept of school climate has received significant attention in educational research yet the definition remains imprecise. With the goal of identifying ways to improve student academic achievement, it is critical to develop a clear and commonly held understanding of the phenomenon of school climate. Many practitioners and researchers have used a variety of terms to describe parts or all of school climate. These include school culture, school environment, ethos, school personality and more. The terms will not be used in this work to avoid misunderstanding and confusion

The school influences student achievement through students attachment, commitment, involvement and most importantly, through the schools' resources and climate (Freiberg, 2009). School climate is a relatively stable aspect of the school environment(Brown, Anfara, & Rooney, 2006) defined as a set of internal characteristics that distinguish one school from another and influences the behaviour of school members. These internal characteristics are most commonly referred to as the quality of interpersonal relations between students and teachers, the extent to which a school is perceived as safe and caring place, the degree to which students, parents and staff are involved in collaborative decision making and the degree to which there are high expectations for student learning (Freiberg, 2009)

Franco (2010) reported that, school climate refers to the intangibles that can affect the feelings and attitude of the students, teachers, staff and parents and it comprises the physical and psychological aspect of a school that proved the environment necessary for teaching and learning to take place. He found four encompassing construct that make up the concept of school climate. These constructs are:

- Physical- the environment is conducive to teaching and learning, safe and welcoming.
- Social- the environment promotes interaction and communication among students, faculty, staff and the community.
- Emotional – an effective environment for students, faculty, staff and community that creates self-esteem and a sense of belonging.
- Academic – the environment endorsed with learning and self-fulfilment for students, faculty and staff. School climate involves a school atmosphere, it is more interpersonal in time and substance, it is perceived through behaviour and focuses not on the content of the organizational life, but the process (Norton, 2008).

Hoffman (2009) identified fifteen key components of a healthy, supportive school climate. Several items overlap with Anderson's variables that affect school environment includes achievement motivation, collaborative decision making, equity and fairness, general school climate, order and discipline, parent involvement, school-community relations, staff dedication to student learning, staff expectations, leadership, school building, sharing of resources, caring and sensitivity, student interpersonal relations, and student teacher relations. Adigun (2010) identified six types of organizational climate, which can be classified into positive and negative school climate. A school is considered to be positive when nothing is hidden from the teachers and every teacher feel satisfied in their place of primary assignment as of result of teachers liberty to conduct research on what they teach and carry out official activities (see Table 1).

Table 1: Characteristics of Negative and Positive School Climate

Positive School Climate	Negative Scholl Climate
Good sense of direction	Lack of leadership, vision, mission and goals
Positive board support	Absence of clear purpose
Positive exchange of ideas	Autocratic administration
Mission	Stagnation
Staff address problems cooperatively	Loss of social and emotional
Good teacher negotiation	Non collaborative, non-cooperative behaviour by school leaders
Empowerment leadership	Too demanding teachers union
Exciting, clear goals for students	Leaving parent and students out of communication links
Unified common goal	Conflict over limited resources strikes
Belief in the school	To- down management
Knowledge communicative leader	Poor working relation between school and community
Consistent credibility	Unfair enforcement of rules
Integrity training	Board of education that pushes personal agenda
Allowing time for staff to identify and internalize	No community support
Abundance of unreasonable rules	Rewarding risk training
Feeling of involvement and goals tuned into by common funding	Budget deficit

Source: Gonder and Hymes (1994) in Adeogun and Olisaemeka (2011)

Hoy and Miskel (2009) mentioned that each school has its own unique climate. This is because schools operate in different ways. The type of climate that prevails in a school is the blend of the behavior of the principal, teachers, pupils and parents in that school. Therefore, climate differs from school to school.

Freiberg (2009) suggests that climate is an ever-changing factor in schools. This is because the principal may choose on specific occasions to adapt different leadership style, which may have a huge impact on the climate that will lead to a change. Again, a new principal may bring some unfamiliar ideas that may change the existing climate.

School climate is value, attitude of stake holders, style of leadership and job satisfaction. Positive school climate play significant value for schools effectiveness and closed school climate (schools with uncommitted leaders', leads unproductive, unsafe, and unhealthy schools) has negative impact on school effectiveness.

Concept of Academic Achievement

People's perception differs as their culture differs. Individual differences, interest goals and motivations make the concept of achievement to have different conceptions. In industrial countries like USA, achievement is measured by individual accomplishments. Gesinde (2000) maintained that achievement is self – determination to succeed in whatever activities one engages in be it academic work, professional work, and spiritual activities among others. Achievement is the generalized tendency to strive for success and to choose goal oriented success in any human endeavours.

Achievement can be defined as a thing that somebody has done successfully, especially using one's own effort and skills or the act of achieving something meaningful in nature Hornby (2010). Academic achievement is commonly measured by examination or continuous assessment but there is no general agreement on how it is best tested or which aspects are most important. Academic achievement is the outcome of education- the extent to which a student, teacher or institution has achieved educational goals. Bossaert, Doumen,

Buyse and Vercchuerea (2011) defines academic achievement as students success in meeting short or long term goals in education.

Good (2009; 56) defines academic achievement as the knowledge obtained or skills developed in the school subjects usually designed by test scores or marks assigned by the teacher. Mehta (2006:8) defines academic achievement as academic performance includes both curricular and co-curricular performance of the students. It indicates the learning outcomes of the students. In classrooms students perform their potentials effectively as a result of it, learning takes place: the learning outcomes changes the behaviour pattern of the student through different subjects.

School Climate and Academic Achievement

School climate is critically linked to risk prevention and health promotion (NASBE, 1994). A positive, respectful school climate provides a solid foundation for supporting students' academic achievements and development of positive attitudes and behaviour. Students who are connected to school(i.e. feel safe, perceive themselves to be more treated fairly by adult, are happy to be in school, feel they are a part of the school community, and feel close to people at school) experience less distress and engage in fewer risk taking behaviours (Blum, 2005). School Climate research suggest that positive interpersonal relationships and optimal learning opportunities can increase achievement levels and reduce high risk behaviour for students in all demographic environments. A positive school climate result in positive anti-social behaviour and also a positive school climate results in positive outcomes for school personnel as well.

Research Problem

It has been observed that lots of renovation work has gone into the public secondary schools in Edo state, government has improved in the renovation of infrastructure, ensured prompt payment of salaries, approval of study leave with pay and training and retraining of teachers through seminars, workshops and the recent approval for teachers to rise to the position of permanent secretary in the state and also has given allowances to teachers to make the school climate to be receptive. Despite all, there is still poor academic achievement. This is very worrisome. Could it be that students' academic achievement goes beyond improving on the school climate? Therefore this has brought about the investigation of why the situation is so.

Purpose of the Study

The main purpose of the study is to determine the relationship between school climate and student academic achievement in Edo state public secondary schools. Specifically the study intends to:

- Investigate the situation of school climate in Edo state
- Find out level of student academic achievement in Edo State secondary school; and
- Ascertain the relationship between school climate situation and students' academic achievement in Edo State secondary school;

Research Questions

The following research questions will guide the study:

- What is the school climate situation in Edo State public secondary school?
- What is the level of student's academic achievement in Edo state public secondary school?

Research Hypotheses

The following hypotheses were raised for the study:

- There is no significant relationship between school climates situation and students' academic achievements in Edo State public secondary schools.
- The situation of school climate and students' academic achievement are not the same in urban and rural school in Edo state public secondary schools.

METHOD

The descriptive survey research design was adopted for the study. This research type and design is considered to be the most appropriate because it observed data on school climate and student academic achievement and described the way they are. The population of the study consisted one hundred and forty (140) schools in Edo South Senatorial district. The SSCE result of the students in WAEC examination was used to ascertain the schools' academic achievement. The sample size of this study was 28 schools which represents 20 percent of the population. The multi-stage random sampling technique was used in selecting the schools. The school was stratified according to Local Government Areas, the number of schools in each Local Government Areas was itemized. Two research instruments were used for this study; a questionnaire titled "School Climate Questionnaire" (SCQ) and a checklist to assess students' Academic Achievement. In order to ensure the appropriateness of the research instrument, it was subjected to validation by the research supervisor, the Cronbach's alpha statistics of .751 was utilized to establish the consistency of the questionnaire. The data obtained was collated with the use of both descriptive and inferential statistical methods. The mean was used to answer research questions: Pearson Product Moment Correlation, Linear Regression and Multiple Regression were adopted to test hypothesis 1 and 2.

RESULT

Research Question One

What is the school climate situation in Edo State public secondary school?

Table 2: mean responses of respondents on school climate situation in Edo state public secondary school

S/N	School Climate Situation	Mean	Stand. Dev.
	Physical appearance		
1	Classroom	3.11	.831
2	Laboratories	2.77	.903
3	Libraries	2.65	1.057
4	Staff rooms and offices	2.90	.933
Average Mean		*2.86*	
	Teachers availability		
5	Teacher Availability/Appropriate teachers	3.09	.871
6	Principal supervisory roles	2.87	.974
7	Cordial relationship between teachers and principals	3.03	.913

8	Close working relationship among teachers		3.16	.803
Average Mean			**3.04**	
	Facilities Availability			
9	School Register		3.18	.898
10	Board and Chalk marker		3.10	.857
11	Instructional Materials		2.86	.886
12	Tables, Chairs and Desk		3.09	.875
Average Mean			**3.06**	
	Security			
13	The school is Fenced		3.33	.775
14	The school environment are kept safe and clean		3.13	.956
15	Abled security officers are always on standby		2.73	1.060
16	CCCTV camera are strategic areas		2.03	.650
Average Mean			**2.81**	

Table 2 presents the mean responses of respondents on school climate situation in Edo State public secondary school. The table shows with average means of 2.86, 3.04, 3.06 and 2.81 that the school climate situation in Edo State public secondary school seems conducive and favourable. However, the findings revealed that facilities availability seems to be the most favourable followed by teachers availability, physical appearance while security seems to be the least among all.

Research Question Two

What is the level of students' academic achievement in Edo state public secondary school?

Table 3: mean academic achievement of students' in edo state public secondary school

Schools	Mean	Remark
Urban	54	Good performance
Rural	48	Fair performance
Single Sex	55	Good performance
Mixed Sex	63	Good performance
Below 500 Students	57	Good performance
500 Students and Above	44	Fair performance
1-20 Years	53	Good performance
21 Years and Above	52	Good performance
Overall Average Mean	**53.25**	

Table 3 presents the mean academic achievement of students in Edo State public secondary school. The table revealed the level of students' academic achievement based on school classifications which include location of school, school type, size of school and age of school. The table revealed based on location of schools that students from urban schools (mean = 54) generally have fairer academic achievement compared to students from the rural region (mean = 48). Also, based on school type, it was revealed that single sex schools (mean = 55) do not perform better than mixed schools (mean = 63) in term of academic achievement, though both schools seems to have fairly good academic performance. More so, in terms of size of school, schools with students below 500 (mean = 57) have academic edge over those with more studentship (mean = 44). Meanwhile, both schools that have been in existence below and above twenty years seems to record almost similar academic achievement, although, schools with existence of between 1 and 20 years (mean = 53) seems a step better

than other with existence of over twenty years (mean = 52). However, the table revealed an overall average mean of 53.25 which shows that the level of students' academic achievement in Edo State is average (i.e. good).

Analysis of Research Hypotheses

Hypothesis One

There is no significant relationship between school climate situation and students' academic achievement in Edo state public secondary schools.

Table 4: Pearson Correlation showing relationship between school climate situation and students' academic achievement in Edo state public secondary schools

		Climate situation	Academic achievement
Climate situation	Pearson Correlation	1	.208
	Sig. (2-tailed)		.000
	N	348	348
Academic achievement	Pearson Correlation	.208[**]	1
	Sig. (2-tailed)	.000	
	N	348	348

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

The data in table 4 presents the relationship between school climate situation and students' academic achievement in Edo state public secondary schools. The table shows that a positive and fairly weak relationship exist between the two variables (r = .208). The table shows further that the relationship between the two is significant ($p < 0.05$). Hence, hypothesis one was rejected. Thus, there is a significant relationship between school climate situation and students' academic achievement in Edo state public secondary schools.

Hypothesis Two

The situation of school climate and students' academic achievement are not the same in rural and urban schools in Edo state public secondary schools.

Table 5: t-test showing differences between rural and urban schools on school climate and students' academic achievement

School climate & Academic achievement	N	Mean	Std. Dev.	Df	T	Sig.
Urban	277	31.0000	8.51469	346	-1.877	.000
Rural	71	38.1304	8.18520			

The information in table 5 shows differences between rural and urban schools on school climate and students' academic achievement. The table shows a significant difference between the two groups on both the situation of school climate and students' academic achievement (df = 346; t = -1.877; $p < 0.05$). Thus, hypothesis two was accepted. Hence, the situation of school climate and students' academic achievement are not the same in rural and urban schools in Edo state public secondary schools.

DISCUSSION OF FINDINGS

The finding of the study revealed that the school climate situation in Edo State public secondary school is conducive and favourable. It was also discovered that facilities availability seems to be the most favourable followed by teachers' availability, physical appearance while security seems to be the least among all. This finding was corroborated by Blum, (2002, 2005) who opined that a positive, respectful school climate provides a solid foundation for supporting students' academic achievements and development of positive attitudes and behaviour. Students who are connected to school (i.e., feel safe, perceive themselves to be more treated fairly by adult are happy to be in school, feel they are a part of the school community, and feel close to people at school) experience less distress and engage in fewer risk taking behaviours.

The finding of the study revealed that the level of students' academic achievement in Edo State is good. This finding was supported by Lassiter (2005) who looks at students' academic achievement as referring to a students' strong performance in a given academic area. A student who earns good grades or awards in science has achieved in the academic field science. He further stated that education associations and schools monitor the overall level of students' academic achievement to decide what, if any challenges needs to be made in the educational system.

The finding further revealed that there is a significant relationship between school climate situation and students' academic achievement in Edo state public secondary schools. This finding was supported by Deal and Petersen (2010) found characteristics common to effective schools include strong leadership, a climate of expectation, an orderly but not rigid atmosphere, and effective communication style. In addition, the presence or absence of a strong educational leader in the climate of the school and attitudes of teaching staff can directly influence student achievement. The school climate is positively connected to student achievement as proved in research literature (Hoy, Hannum, & Tschannen-Moran, 1998; Ma, Wilkins, 2002, Brown & others, 2004; Lehr, 2010) and in previous TIMSS studies (Martins Mullis, Gonzalez, & Chrostowki, 2004) a more positive school climate is connected to higher achievement. In more details, Stewart (2008) pointed out that at school level; the sense of school cohesion is the strongest predictor of student achievement. When students have the sense of commitment and feel a sense of attachment their achievement are higher (Stewart, 2008). Students who attend schools with a more positive climate tend to have more positive attitudes towards school and school subjects which lead to higher achievements (Kos, 2010; Krall, 2003; Lehr, 2010).

The finding of the study revealed that the situation of school climate and students' academic achievement are not the same in rural and urban schools in Edo state public secondary schools. This finding was supported by Boylan (2008) who reported that rural schools were inferior and lacking in the range of facilities with high staff turnover and suffered from lack of continuity in their curriculum. A child's environment that is rural or urban exerts considerable influence on his intellectual development. Okonkwo (2011) pointed out that schools in rural areas is likely to face the problem of poor academic achievement due to the inequality in provision of human and material resources required for positive educational achievement. This in turn will perpetuate inequality of access to education provision of adequate number and quality of teachers, contents and methods of teaching. An urban child has an edge over the rural ones in terms of "life chances" such as better education and the socialization pattern (Ajeh, 2010).

CONCLUSION

Based on the findings of the study, it was concluded that the school climate situation in Edo State public secondary school is conducive and favourable. The level of students' academic achievement in Edo State is good. There is a significant relationship between school climate situation and students' academic achievement in Edo state public secondary schools. The situation of school climate and students' academic achievement are not the same in rural and urban schools, mixed and single schools, large and small school and old and new schools in Edo state public secondary schools.

Recommendations

Based on the result of the findings and the conclusion above the following recommendations were made for policy development in Edo State:

- Schools should be supplied educational materials such as chairs, table, board markers or chalk, charts, etc. to enhance learning
- The principal and staff must work together as a team to create a good learning environment. They should meet regularly to discuss the lesson plans and activities and to air any concern they might have.
- Principal should establish friendly atmosphere in the school and eliminate all harsh statements because it can keep teachers from interacting, participate and exchange ideas in discussing important issues.
- Adequate time should be allotted for instructional supervision by school principals.

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