

Influence of School Climate on Students' Achievement and Teachers' Productivity for Sustainable Development

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The study covers ten secondary schools in Lagos State of Nigeria. The purpose is to ascertain the relationship between school climate and students' achievements' and teachers' productivity for sustainable development. A total sample of 150 respondents was taken. Ten principals, seven teachers and seven students were randomly picked per school. This implies a total of 15 respondents per school. A multi-itemed SCEQ (school climate effects questionnaire) was used to collect data. A 100% return rate was recorded. The findings show that there is a significant relationship between school climate, performance and productivity. It is strongly recommended that stakeholders of education in the third world nations should take the bulls by the horns by ensuring that good and friendly school climate is put in place, so as to guarantee a sustainable development.

Keywords: school climate, students' achievement, teachers' productivity, sustainable development

Introduction and Background

School climate has been reported to have a direct relationship with students' academic performance and teachers' productivity. Then, what are those factors that constitute the healthy climate? Won't it be better for education stakeholders to harness the good potentials of the healthy climate to ensure better academic achievement and productivity? The fact worthy of note is that school climate constitutes humans and materials. The interactions between and amongst the human and material entities determine the school climate. Well informed parents consider the school's climate before enrolling their wards.

School climate may be defined as an aggregate measure of school's characteristic, such as relationships between parents, teachers and administrators, as well as the physical facilities on ground. It could be seen as the overall interaction resulting from human relationships with each other and with the physical plants in the school environment. Climate refers to the atmosphere in an organization. It affects the morale and personal satisfaction of all persons involved in the Denver public schools. The important link between students' achievement and ability to attract and retain quality employees, and school as well as district climate is inevitable (DPS-DCTA partnership, 2009). Climate reflects how staff, student and community feel about a school and/or the district—Whether it is a positive place or one that is full of problems. “Any one who spends time in schools quickly discovers how one school can feel different from other schools. School climate is a general term that refers to the feel, atmosphere, tone, ideology or milieu of a school. Just as individuals have personalities, so too do schools; a school climate may be the personality of a school” (Education Encyclopedia in School Climate, 2002, p. 1).

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Literature Review

In the recent times, sustainable development issues have dominated the debate and discussion tables of many nations, specially the third world countries. At the international sustainable development research conference in Indian, it was observed that "Although the average Indian family is less than one twentieth of the average American family, the impacts on India are going to be that the people who did not cause climate change are going to bear the main negative effects of it" (Portal, 2009, p. 2). It may seem that the climate change here implies of atmospheric change, such as gas emission and water crises in the face of growing gross domestic product and other shortages, but the fact remains that developing nations have an urgent need to address the atmospheric, environmental, cultural, psychological, academic and religious climate so as to ensure sustainable development.

This study concentrates on the academic climate. The school climate, environment, psychological tones and the relationships between school heads and teachers, teachers and teachers, teachers and students, school heads and students, students and students, all constituting factors that influence academic performance and teachers' productivity.

Asko Nummiren, Finnish Ambassador to India, made a call for maximum cooperation on sustainable development and a move from rhetoric to global action in a conference. He pointed out that although the concept of sustainable development was widely accepted as the core of many development policies, there was still a need to change to more sustainable production and consumption. Although sustainable development has been mainstreamed with instruments, incentives and regulations, we are still witnessing very unsustainable growth paths (Portal, 2009). Also on atmospheric climate, a study reports:

Without a global strategy to address climate change, the environmental movement may turn on the fossil fuel industries. The legal foundations have been laid to sue for damage caused by greenhouse gases. Large reinsurance companies estimate the annual economic loss due to climate change could reach \$300 billion per year within a decade. Coastal urbanization is increasing the numbers of people vulnerable to coastal flooding. Environmental damage to developing nations caused by richer countries is more than the entire third world debt of \$1.8 trillion. To help developing countries leapfrog unsustainable practices to more sustainable ones, global environment facility provided \$7.4 billion in grants and \$28 billion in co-financing since 1991 and an addition \$3 billion to 2010; more funds are being established by the world Bank (\$5.5 billion), Japan (\$10 billion for five years), and the Asian development Bank (\$1.2 billion). The UN estimates that developing countries will need \$100 billion annually to finance. Climate change mitigation and \$28-67 billion for adaptation by 2030. (The millennium project, global challenges facing humanity, 2009, p. 1-5)

This same study emphasizes that although developing countries have contributed the least to global warming, they are the most vulnerable to climate change because of their dependence on agriculture and fisheries. The synergy between economic growth and technological innovation has been the most significant engine of change for the last 200 years, but unless we improve our economic, environmental and social behaviors, the next 200 years will be difficult. Yet without sustainable growth, billions of people will be condemned to poverty and much of civilization will collapse. It is said that Africa will hit hardest. China is the world's largest CO₂ emitter, because they manufacture many goods for other countries yet only 1% of 600 million Chinese city dwellers breath air considered safe in Europe. All these kinds of unsafe and impure air reduce the life expectancy of people in third world nations. A very worrisome situation is that school climate includes the property of schools that transcends the differences in the way individuals relate to the environment into a school. In a study, Nusser and Haller (as cited in Greenberg Elizabeth, 2004) found a positive correlation among the ways students, teachers and principals rated issues of safety and discipline—Schools that were ranked highly by one will be ranked highly by the other

two. The principals, on the average, gave more favorable ratings than teachers; and teachers, on average, gave more favorable ratings than students. They also found that the three groups (principals, teachers and students) tended to agree on the dimensions of the school climate. This confirms that despite of the difference in the intensity or weight of ratings of school climate, the three categories of persons, on the average, still concur on the extent of school climate's influence on performance and productivity. The response or shallow ratings of the students are not out of place. This is because most of these students are adolescents, and people who closely relate with adolescents discover that they have excessively stronger reactions towards issues more than the adults (principals and teachers). The adolescents are on bumpy ride or rather a stormy decade. They are on transit from dependence to independence and they wrestle with several conflicting feelings, demands and thought, they do not even understand themselves anymore (Olisaemeka, 2008).

Several youth development studies buttress the importance of climatic influence in their findings that adolescents are less likely to engage in problem behaviors when they feel connected to others in their families, schools or institutions in their communities (as cited in Les & Suet-Link, 2004).

Ashby and Krug (1998) saw school climate as the part of the school environment associated with attitudinal and affective dimensions and the belief systems of the school that influence children's cognitive, social and psychological development. The climate of a school heavily reflects in the social interactions in and out of the classroom and from the faculty lounge to the lunch room. Since values, attitudes, beliefs and communications are subjective matters, researchers primarily rely on participants' perceptions to measure school climate and sometimes aggregate the participants' responses to the level of interest, such as classroom or school (Griffith, 2000). Edmunds (1982) is prominent in linking climate directly to school effectiveness. School climate is found to positively correlate to academic achievement (Greenberg, 2004; Lee & Burkham, 1996; Stewart, 2007). A positive school climate has been found to be positively related to indicators of school success, such as standardized test scores, annual pass measures and school report card information (Destefano, Monrad, May, Mc Guinness, & Dickenson, 2007).

Table 1 gives clearer insight of the positive and negative school climates.

Table 1

How to Make or Break a School Climate

Factors that will damage a school climate	Factors that will restore a school climate
Lack of leadership, vision, mission and goals	Good sense of direction
Absence of clear purpose	Positive board support
Unfair enforcement of rules	Consistent credibility
Poor working relations between school and community	Knowledgeable communicative leader
Abundance of unreasonable rules	Rewarding risk taking
Autocratic administration	Positive exchange of ideas
Board of education that pushes personal agenda	Integrity training
Too demanding teachers union	Empowerment leadership team
Leaving parents and students out of communication links	Exciting, clear goals for students
No community support	Allowing time for staff to identify and internalize missions
Stagnation	Belief in the school
Top-down management	Good teacher negotiation
Non collaborative, non-cooperative behaviors by school leaders	Feelings of involvement and goals tuned into by common funding
Budget deficit	Unified common goal
Conflict over limited resources	Staff addressing problems cooperatively
Strikes	
Loss of social and emotional togetherness	

Note. Source: Gonder & Hymes, 1994.

This study identifies the characteristics of a school leader as a force that will attract and retain teachers. The report says that climate is the responsibility of all (DPS-DCTA partnership, 2003). School climate researches found that interpersonal relationships and optimal learning opportunities for students' school environment can increase achievement levels and reduce maladaptive tendencies. Again, "The interaction amongst classroom climate factors can create a fabric of support that enables all community to teach and learn at optimum levels" (Freiberg, 1998, p. 22-26). The finding worthy of note is that school climate can yield positive educational and psychological outcomes in school personnel, and similarly, a negative climate can prevent optimal learning (Freiberg, 1998; Kuperminc, Lead Beater, Emmons, & Blatt, 1997). School climate is multi-dimensional and influences many individual students, parents school personnel and the community (Megan, 2002).

Leaders must be consummate relationship builders within groups, especially with people different from themselves. Principals should lead by examples and show the same to teachers. The most successful teachers may have the beautiful relationship developed with their principals, motivated for the very best (Edgeron & William, 2006). They also opined that when positive family cultures exist on school campuses, productivity increases, and students excel. Programs and systems are successful when committed and dedicated individuals are within the system. Then we can say that systematic collaboration as a result of established relationships is the true measure of success.

A search institute identifies 13 of the 40 assets that have direct influence: parents involvement in schooling, other adult relationship influence, interpersonal competence, high expectations, caring school climate, school boundaries, school engagement, bonding to school, academic motivation, homework, reading for pleasure and youth programs. Teachers' behaviors and characteristics are not exempted (as cited in Alaska ICE Research Staff, 2006). Another related study found that quality facilities, collegial leadership, teacher professional expertise, community engagement, resources support, adequate and cordial relationships all have a positive relationship with academic performance and teacher productivity (The walls speak, 2006). Overcrowding is found to have a deleterious effect on student learning, chronic noise pollution hinders cognitive functioning and impairs reading skills (Haines, Stansfeld, Job, Berglund, & Head, 2001). In a study by Earthman (2004), temperature, heating and air quality were rated the most influential elements affecting students' achievement and teachers' productivity. Lighting ranked next. Another study also found that teachers' behaviors, which have also been found to be related to the quality of school building for retention/attrition decisions, were significantly related to the quality of school (Buckley, Schneider, & SHANG, 2004).

Methodology

Ten secondary schools in Lagos state were randomly selected. A total sample of 150 respondents were involved. Ten principals, one principal per school, seven teachers and seven students per school were the respondents. This implies a total of 15 respondents per school.

A SCEQ was prepared and administered. A 100% return rate was recorded. This implies that all the sampled respondents filled and returned their questionnaire. The SCEQ was divided into six sections: working conditions, learning environment, home-school relationship, socio-physical environment, safety/security discipline, and teacher care and support. These six sub-sections represent divisions of school climate. Each of these six sub-sections further contains twelve items each. This brings the total items for school climate to 72. The response options were Likerts four-point scale of "Strongly agree", "Agree", "Strongly disagree" and "Disagree". The results were analyzed using percentages and mean values. The perceptions of influence of

climate on performance and productivity by the principals, teachers and students were all harmonized and averaged to arrive at the final result.

Summary

Findings of this study confirm previous research reports that school climate can directly influence academic performance and teacher productivity. Table 2 shows that the mean of all the three response categories affirms that there is a significant and direct relationship between school climate, academic performance and teachers' productivity. This is to the high tone of 73%-80%. It is obvious that more students answered in the affirmative. This tallies with the fact that as adolescents, the students display explosive emotions. But irrespective of students' high responses, both the teachers and principals' responses tilt towards the same affirmative direction with the students.

Table 2

Perceptions of Principals, Teachers and Students for School Climate

School climate	Principals' perception (%)	Teachers' perception (%)	Students' perception (%)	Mean value (%)
Working conditions and general relationships	81	78	71	77
Learning environment	78	78	84	80
Home-school relationship	72	74	80	75
Socio-physical environment	68	70	82	73
Safety/security discipline	72	72	81	75
Teachers care and support to students	73	69	88	77

Conclusion

The findings of this study are inevitably essential to all education stakeholders. Therefore, it becomes pertinent to ensure provision of good learning environment (neat, peaceful, void of air, noise and traffic pollution and friendly disposition) and conducive working conditions (democracy, dialogue, motivation, in-service training and cordial relationship), to improve home-school relationship (free flow of communication between schools and parents), to ensure good socio-physical environment (enough space, well designed buildings, recreation and sports facilities and well ventilated classes), to improve safety, security and discipline levels and to ensure that teachers show enough care and support to students. This implies that efforts should be made to stick to UNESCO (United Nations Educational, Scientific and Cultural Organization) recommended teacher-student ratios so that the teachers will be more effective. It is only when the stakeholders have put a proper structure of friendly school climate in place that one can be rest assured that Nigeria and other third world countries are ready to sustain their development.

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