



### SCHOOL CLIMATE AS CORRELATE OF PRE-SERVICE TEACHERS' ACADEMIC PERFORMANCE IN TEST AND MEASUREMENT

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#### Abstract

School climate refers to the impression benefits and expectations held by members of the school community about their school as a learning environment. The study examines the relationship between school climate and pre-service teachers' academic performance in Test and Measurement. The study employed correlational research design. The population comprised of all the 2019/2020 third year student teachers of Faculty of Education, AE FUNAI totaling 168 students. No sample was done as the entire 168 student were used for the study because the population is manageable. One research question and one hypothesis guided the study. Two instruments were used for data collection for the study. They include; School Climate Questionnaire (SCQ) and Pre-Service Teachers' Performance Questionnaire (PSTPQ). The instruments were trial tested using test retest method. Linear regression analysis was used to answer the research question while regression ANOVA was used to test the formulated hypothesis at 0.05 level of significance. It was found that a significant relationship existed between school climate and pre-service teachers' performance. It was concluded that school climate was a major factor in pre-service teachers' performance in schools. Recommendations were therefore based on the findings of the study that conducive environment should be provided for pre-service teachers in order to enhance efficiency and good performance in Test and Measurement, other courses and good performance of teachers in general.

#### Keywords

Performance, Pre-service Teachers, School Climate, Test and Measurement.

#### Introduction

The role played by teachers in a school system can never be over emphasized. According to Adedeji & Owoeye (2002), teachers represent an indispensable human resource and the most important element in the school system, more important than the quality of equipment and materials or level of financing. Quality education depends on quality of teachers. In recognition of the pivotal role of quality teachers in the provision of quality education at all levels, students are trained in Colleges of Education and Universities to become teachers. Students trained from higher education institutions to become professional **teachers** are referred to as pre-service teachers. Pre-service

education of teachers means, education of teachers before they enter into service as teacher. Pre-service education is carried out for preparing different types of teachers. Pre-service teacher preparation is a collection of unrelated courses and field experience. During this period of teacher education programmes, teaching practice goes side by side, while they are getting knowledge about theory papers. Pre-service teachers are trained to plan their lessons and core courses that will make them professionally sound. Brittin (2005) opined that teachers are required to set up a school learning environment in which students can learn effectively, and this involves planning materials, strategies and timing.

Schools are social institutions and also hierarchical organizations. Within school organizations there are students, teachers, administrators, and many kinds of service personnel. Members of each of these groups occupy distinctive positions and are expected to behave in certain ways. The role expectations of these groups and norms ascribed to them are different from each other. Clearly, the relationship among many kinds of people in schools varies and are complex. Only if those relationships are understood and generally accepted can the school organization function effectively (Campbell, Corbally & Nystrand, 2003). Structurally, there is a series of super ordinate-subordinate relationships within schools. Functionally, this hierarchy of relationships (principal to teacher, teacher to student, and so on) is the basis for allocating and integrating roles, personnel, and facilities to achieve school goals. Operationally, educational organizations are people intensive, thus the process in schools takes place person-to-person interaction. Every educational organization has a climate that distinguishes it from other schools and influences behavior and feelings of teachers and students for that school. The feelings and attitudes that are elicited by a school's environment are referred to as school climate.

School climate is the impression, benefits and expectations held by members of the school community about their school as a learning environment, their associated behavior and the symbols and instructions that present the pattern expressions of behavior (Gary & Judith, 2005). It is commonly defined as the quality and character of school life according to School Climate Council, (2007). Adeogun and Olisaemeka (2011) defines school climate as an aggregate measure of school characteristics, such as relationships between parents, teachers, administrators as well as physical facilities on the ground. School climate can also be seen as the presence of atmosphere of conscious commitment to foster well-being, academic achievement and civic achievement and development of students (Rasaq, 2015). Therefore, in the Nigerian context, a healthy school climate is highly influenced and affected by both formal and informal organization and also by the personality of the organization and its leadership and management. Abdul Razak (2006) opines that school climate is a social system that constructs and designs the learning environment. This means that a positive and healthy school has both conducive teaching and learning environment that allow and encourage

students to learn and teachers to impart knowledge and skills to the students in a caring and healthy environment.

School climate is more than one individual's experience; rather, it is an overarching experience or "feel" of the school. School climate is the sum of the values, cultures, safety practices, organizational structures within a school, teaching practices, diversity, leader-teacher relationships, teacher-teacher relationships, parent-teacher relationships, and student-teacher relationships. It is the concept of school climate which is a multidimensional construct that includes physical, social, and academic dimensions. The **physical dimension** includes: appearance of the school building and its classrooms; school size and ratio of students to teachers in the classroom; order and organization of classrooms in the school; availability of resources; and safety and comfort. The **social dimension** includes: quality of interpersonal relationships between and among students, teachers, and staff; equitable and fair treatment of students by teachers and staff; degree of competition and social comparison between students; and degree to which students, teachers, and staff contribute to decision-making at the school. The **academic dimension** includes: quality of instruction; teacher expectations for student achievement; and monitoring student progress and promptly reporting results to students and parents. Hoy and Miskel (2001) see school climate as a blend of beliefs, values and attitudes shared by stakeholders, level of independence, styles of leadership and job satisfaction in a school. This implies that school climate is the product of interaction between physical, social and academic dimensions in teaching and learning process.

School climate according to Fakunle (2010) are of various types, which include: opened, closed, controlled, paternal, familiar or autonomous climate. Open climate is a type of school climate environment where nothing is hidden from any worker, every teacher feels satisfied with his/her work (Abiodun & Olayemi 2010). There is low hindrance, low disengagement, high intimacy, high moral and high consideration as well in open school climate. In addition, open school climate is characterized by atmosphere of love and cordial relationship between super-ordinate and subordinate, environment of trust, respect, mutual obligation and concern for others welfare and so on. Closed school climate on the other hand is a type of school environment which is characterized by high disengagement, high hindrance, low morale and low

consideration. The teachers are displeased with everybody while exhibiting lack of commitment to work (Kupermines, 2001). Autonomous school climate is characterized by complete freedom for teachers to conduct their work. Controlled school climate is a school environment where the head is highly domineering and highly not considerate but lay emphasis on productivity. Teachers' problems are not given attention. It is an atmosphere of labourious work at the expense of social life. Familiar school climate is a school environment where congenial sociability is emphasized at the expense of task accomplishment, while paternal school climate is a school environment where teachers are not over burdened with work but there is lack of mutual understanding in the system. The school climate in many Nigerian universities which is the focus area of study appears to fall into one of the categories of school climate type identified above. From the above definition school climate can be perceived as the prevailing atmosphere in the school that distinguishes one school from another and influences the behaviours of people in it. Indeed, positive school climate requires the shared recognition and commitment of the school community members. A positive school climate includes identification, open and nurturing school methods that attempt to foster a sense of responsibility and efficiency among pre-service teachers and teachers. School climate vary greatly. Whereas some schools feel friendly, inviting, and supportive, others feel exclusionary, unwelcoming, and even unsafe.

The School Climate Council (2007) suggests that school climate encompasses the experiences of individuals in the school, including learning and building relation. Students spend a significant amount of time in school. Therefore, pre-service teachers' feelings about their school experience can have a big impact on their daily lives. Pre-service teachers not only need to feel safe at school, but should also feel comfortable, and that they are part of a supportive environment. Persistent positive school climate has been linked to positive student development, learning, academic achievement, effective risk prevention and health (Guffey, & Higgins D'Alessandro, 2013). How students, teachers, and staff feel about their school climate underlies individual attitudes, behaviours, and group norms. Schools that feel safe, for instance, foster high-quality relationships among students and teachers while decreasing the probability of violence. However, it is important to note that the

climate of a school is not necessarily experienced in the same way by all of its members. Rather, there is variability in individual perceptions of a school's climate, and the researchers propose that it is the subjective perception of the environment that influences individual student outcomes. Thus, if a student feels that a teacher does not care about her, this perception will impact the student's behaviour and performance in the classroom. School climate has also been identified and associated with factors affecting a school's efficiency and students' performance (Pashiardis, 2000). A school that is academically excellent is one where the teachers set high expectations that are nevertheless reasonably achievable by the students. In order for this to take place, both teachers and students must work closely together, sharing and working toward the same academic goals in a setting of mutual trust and dependence to achieve these set targets and expectations. These are all indicators of an efficient, healthy, and positive school climate.

School climate play a significant role in providing a healthy and positive school atmosphere. Freiberg (2000) note that the interaction of various school and classroom climate factors can create a fabric of support that enables all members of the school community to teach and learn at optimum levels. It has been found that a positive school climate can yield positive educational and psychological outcomes for students and school personnel. Similarly, a negative climate can prevent optimal learning and development (Freiberg, 2000; Kupermines, 2001; Loukas (2007). Manning and Saddlemire (2004) conclude that aspects of school climate, including trust, respect, mutual obligation, and concern for other's welfare can have powerful effects on educators' and learners' interpersonal relationships as well as learners' academic achievement and overall school progress. What children learn about themselves in school through interactions is equally important as the academic knowledge they receive. School climate, if positive, can provide an enriching environment, both for personal growth and academic success. A positive school climate should be a priority because learning in a safe, engaged, and responsive environment sets the foundation for positive academic performance.

The term academic performance is commonly used interchangeably with academic achievement which refers to the level of individual attainment on learning tasks (Salaudeen, 2014). According to Adediwuru & Tayo cited in Hakimi & Bashar (2014), academic performance is the display



of knowledge attained or skills developed in school subjects designed through test and examination scores or marks assigned by the subject teachers. Academic performance according to Calvin & Chamba (2011) can also be seen as some methods of expressing students' scholastic standing usually in grades, for a course or the average of all the courses. They refer to such performance as average scores got from tests which could either be termed average or poor. The problem of poor performance of students in Test and Measurement examination in many Nigerian universities is decreasing the quality of teacher education in Nigerian and also has received considerable attention of experts in Nigerian education sector. Test and Measurement is a course which focuses on the principles and procedures for designing, developing, implementing and evaluating tests and other mechanisms used to measure learning, evaluate students' progress and assess the performance of specific teaching tools, strategies and curricula. It includes instruction in psychometric measurement design and test implementation technique.

However, it has become an annual practice that cases of poor performance are being reported in the course. The release of such poor results fuel the beginning of fierce discussions and ranging debates on the possible causes. In fact these debates and discussions have often been ascribed to students' weakness in mathematics, poor teaching methods, in effective use of teaching materials, unqualified personnel, lack of attention and poor listening habit during teaching-learning process in the classroom. Several studies have been conducted on the effects, relationship or influence of various factors such as personal, psycho-social academic, teachers and even social factors on such students' performance. Various and varied results have been the outcome of those research endeavours, yet some gaps still exist in the area of school climate relationship to academic performance of pre-service teachers' especially in Test and Measurement. It is on this premise that the researchers intend to examine the school climate relationship of pre-service teachers' academic performance in Test and Measurement. When school climate is enhanced, student academic performance can also be realized successfully because effective, healthy and positive school climate can stimulate academic achievement of students.

The main purpose of the study is to examine the relationship between school climate and pre-service teachers' academic performance in Test and

Measurement. To achieve the above mentioned purpose, one research question and one hypothesis guided the study.

1. What is the relationship between schools climate and pre-service teachers' academic performance in test and measurement?

### **Hypothesis**

**The hypothesis below was formulated to guide the study and tested at 0.05 level of significance**

1. There is no significant relationship between school climate and pre-service teachers' academic performance in test and measurement.

### **Methodology**

The study adopted correlational research design. Correlational design according to Nworgu (2015) is the type of design that seeks to establish what relationship exists between two or more variables. The population comprised of all the 2019/2020 third year student teachers of Faculty of Education, AE FUNAI totaling 168 students. No sample was done as the entire 168 students were used for the study because the population was manageable. One research question and one hypothesis guided the study. Two instruments were used for collection of data for the study. They include; School Climate Questionnaire (SCQ) and Pre-Service Teachers' Performance Questionnaire (PSTPQ). The instruments have two sections A and B. Section A deals with the bio-data of the respondents such as school, faculty, department, level, age, among others. section B have two parts, part one deals with types of school climate obtainable in Nigerian universities which includes open, closed, controlled, paternal, familiar and autonomous climate. Pre-Service Teachers' Performance Questionnaire which was divided into two sections was used to measure pre-service teachers' performance. The validity of the instruments were ensured by given the instruments to three experts in Test and Measurement and their views, corrections and suggestions were taken into consideration. The instruments were trial tested and internal consistency of the instruments was determined using Cronbach Alpha method. Reliability coefficients of 0.91 and 0.93 were obtained for SCQ and PSTPQ respectively. Linear regression analysis was used to answer the research question while regression ANOVA was used to test the formulated hypothesis at 0.05 level of significance.

**Results**

**Research Question 1:** What is the relationship between schools climate and pre-service teachers' academic performance in test and measurement?

**Table 1: Regression analysis of the responses on the relationship between schools climate and pre-service teachers' academic performance in test and measurement**

Variables	r	R <sup>2</sup>
Schools Climate and Pre -Service teachers' academic performance in Test and Measurement	0.64	0.41

(R<sup>2</sup>) = Coefficient of Determination

The result on **Table 1** shows that the correlation coefficient between schools climate and pre-service teachers' academic performance in test and measurement was 0.64. This means that, there existed a high positive relationship between schools climate and pre-service teachers' academic performance in test and measurement. Table 1 also revealed that, the coefficient of determination (R<sup>2</sup>) associated with the correlation coefficient of 0.64 was 0.41. This coefficient of determination (R<sup>2</sup>) indicates that, 41% of variation in pre-service teachers' academic performance in test and

measurement was attributed to schools climate. This is an indication that 59% of the variation in pre-service teachers' academic performance in test and measurement is attributed to other factors other than school climate.

**Hypothesis One:** There is no significant relationship between school climate and pre-service teachers' academic performance in test and measurement.

**Table 2: Regression Analysis** between school climate and pre-service teachers' academic performance in test and measurement

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	820.808	1	820.808	25.299	.000 <sup>a</sup>
	Residual	5385.710	166	32.444		
	Total	6206.518	167			

The result in Table 2 shows that an F-ratio of 25.299s with associated exact probability value of 0.00 was obtained. This probability value of 0.00 was compared with 0.05 set as level of significance for testing the hypothesis and it was found to be significant because 0.00 is less than 0.05. Thus, the null hypothesis which stated no significant relationship between school climate and pre-service teachers' academic performance in test and measurement was rejected. The researchers therefore conclude that there is a significant relationship between school climate and pre-service teachers' academic performance in test and measurement.

**Discussion of Findings**

The findings of the study revealed that there exists a high positive relationship between schools climate and pre-service teachers' academic performance in test and measurement. The result also showed that there is 41% of variation in pre-

service teachers' academic performance in test and measurement, implying that there is an indication that 59% of the variation in pre-service teachers' academic performance in test and measurement is attributed to other factors other than school climate which may include sampling error, etc. This is in agreement with the finding of Okeke (1990) who indicated that performance of students is a function of school climate.

The significant relationship found in the study between school climate and pre-service teachers' performance in Test and Measurement might have resulted in the fact that school environment plays a major role in influencing and enhancing pre-service teachers' performance either, positively or negatively. This finding is in line with Fakunle (2010) which found out that work environment was significantly related to workers' performance and productivity. Also the study is in line with the findings of Adeogun and Olisaemeka

(2011) which found out that selected school climate factors such as; working conditions, learning environment, home-school relationship, socio-physical environment, safety and security, discipline, and teacher care and support had a significant relationship with performance and productivity. The study also discovered that there was a significant relationship between pre-service teachers' performance in departments that have open and closed school climates. This finding corroborated the work of Rasaan (2015) who found out that teachers in open school climate are more effective and efficient than their counterparts in closed school climate.

### Conclusion

In the light of this findings, it is concluded that schools climate have great influence in students academic performance. School climate has been identified and associated with factors affecting a school's efficiency and students' performance. A school that is academically excellent is one where the teachers set high expectations that are nevertheless reasonably achievable by the students. School climate can hinder students' performances if proper attention and orientation is not given to students by lecturers, counselors and management of different institutions. In order for this to take place, both teachers and students must work closely together, sharing and working toward the same academic goals in a setting of mutual trust and dependence to achieve these set targets and expectations.

### Recommendations

Based on the findings of this study, the following recommendations were made:

1. School management should provide conducive environment for students and teachers in order to enhance efficiency and good performance.
2. Course Coordinators of different programmes and courses should endeavor to combine two climates together preferably controlled and open climates in their day to day running of their departments to create a favorable climate in order to enhance better job performance among pre-service teachers.
3. Teacher education institutes should make sure that school climate is favorable to would-be-teachers to enhance productivity.
4. Seminars, workshops and conference should be organized to teach and train teachers on the different school climates and climate change at large.
5. Stakeholders in schools should cultivate warm student-teacher relationship and embrace participatory decision making as it will boost pupils' academic performance.
6. The management should form school climate team and involve them in professional development opportunities to learn about school climate research and best practices.

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