

Original Paper

School Climate and Students' Academic Achievement in Public Secondary Schools in Anambra State

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Abstract

This study investigated school climate and students' academic achievement in public secondary schools in Anambra State. Three research questions and hypotheses guided the study. This is a correlational survey of the ex-post-facto research design. 127(50%) respondents were sampled from a population of 254 principals using a simple sampling technique. A self-developed questionnaire titled School Climate Questionnaire was employed to collect information from respondents. While a checklist was used to obtain information on students' academic achievement. The questionnaire was validated through the face and content validity. It was also subjected to a reliability test using Cronbach-Alpha and a coefficient of .79 was obtained revealing a high-reliability index. Coefficient of determination, Pearson r , and Regression were used for data analysis. The finding shows that the relationship between teachers' motivation, instructional supervision, school climate, and students' academic achievement in Anambra State was significant. It was thus, recommended that since educational supervision enhances instructors' professional competence and the effectiveness of their instructional activities school principals should ensure that the climate of the school enhances the teacher's job.

Keywords

School climate, students' academic achievement, Teachers' Motivation, Instructional Supervision, and Anambra State

1. Introduction

Primary education is often followed by secondary education, which comes before postsecondary education. Secondary education's main goal is to prepare students for both higher study and active engagement in society. Secondary education, specifically, provides all primary school leavers with the opportunity for a higher level of education, regardless of gender, social status, religious or ethnic background; offer a diversified curriculum to cater to the differences in talents, opportunities, and future

roles; provide trained manpower in the applied sciences and technologies and commence at sub-professional grades; develop and promote Nigerian languages, art, and culture; and provide trained manpower in the applied sciences and technologies beginning at sub-professional grades (Nwakpa, 2017).

The above aims of secondary education have partially been realized when determined by students' academic achievement, which has been on an increase, particularly in Anambra and Imo States, where both States have ranked among the first-ten in WASSCE as established by literature. For instance, in 2015, WASSCE result ranking statistics revealed Anambra 1st, Abia 2nd, Edo 3rd, Rivers 4th, Enugu 5th, Lagos 6th, Imo 7th, Delta 8th, Kaduna 9th, and Ebonyi 10th, respectively. Also, in 2016, WASSCE result ranking statistics show Abia 1st, Anambra 2nd, Edo 3rd, Rivers 4th, Imo 5th, Lagos 6th, Bayelsa 7th, Delta 8th, Enugu 9th, and Ebonyi 10th, respectively. Furthermore, in 2017, WASSCE result ranking statistics affirmed Abia 1st, Rivers 2nd, Edo 3rd, Imo 4th, Bayelsa 5th, Anambra 6th, Lagos 7th, Taraba 8th, Enugu 9th, and Delta 10th respectively. While in 2018, WASSCE result ranking statistics revealed Abia 1st, Anambra 2nd, Edo 3rd, Rivers 4th, Imo 5th, Lagos 6th, Bayelsa 7th, Delta 8th, Enugu 9th, and Ebonyi 10th, respectively (Inyang, 2018). Furthermore, in 2019, WASSCE result ranking statistics showed Abia 1st, Anambra 2nd, Edo 3rd, River's 4th, Imo 5th, Lagos 6th, Bayelsa 7th, Delta 8th, Enugu 9th, and Ebonyi 10th (Obinna, 2019). This trend continues and education stakeholders, mainly in Anambra State, have attested students' academic achievement to students' hard work, previous schooling, parents' education, family income, and self-motivation as factors that have significant effects on the student's general academic achievement.

Though in recent times, attention has been focused on the quality of teachers and the non-commitment of the students to their studies due to distractions that hamper learning, very little attention has been given to the school climate as a factor that might determine students' academic achievement. School climate as a variable in this study is regarded as an aggregate measure of the school's characteristics, such as relationships between parents, teachers, and administrators, communication, teachers' motivation; and instructional supervision. 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 could affect the morale and personal satisfaction of all those involved in the school. The important link between students' achievement and the ability to attract and retain quality employees, and school, as well as district climate, is inevitable (DPS-DCTA partnership, 2009). Climate reflects how staff, students, and the community feel about a school and/or the district, whether it is a positive place or one that is full of problems. Anyone who has spent time in a school will quickly realize that each one has their environment. The phrase "school climate" refers to the vibe, tone, philosophy, and environment of a school. Schools have personalities just as individuals do; the school's culture may be a good indicator of that personality.

School climate variables such as teachers' motivation and instructional supervision are key variables to students' academic achievement. The principal and teachers set the tone of the school and develop a

distinct school climate by offering incentives and inducements. As a result, the behaviour of the principal or teachers should influence students' academic achievement. Teachers' motivation is an inner drive that pushes individuals towards action to achieve target objectives. When students are adequately motivated directly or indirectly, they will perform positively academically. Students who feel positive about their awards, prizes, and encouragement are also more likely to perform better. Thus, a principal or teacher who places a high value on students' motivation will have a warm and positive school climate. Teachers' motivation is seen as the person's effort to accomplish his or her duties, dedicating the needed effort and continuing it (Celikoz, 2009). Teachers' motivation plays a significant role in an individual's educational life and achievement. Teachers' motivation reflects in learners' choices of academic tasks, the time and effort they allocate to each task, and their perseverance in academic tasks. Teachers' motivation also enables them to correctly handle obstacles they come across in the learning process (Peklaj & Levpušček, 2006). Wiegfield and Eccles (2011) believe that teachers' motivation is a multi-dimensional construct. The concept of teachers' motivation is closely related to other constructs in education and psychology. They include attention, needs, goals, and interests, which all focus on stimulating individual learners and raising their interest and attention towards engaging in an action or behaviour and the accomplishment of such actions or goals (Krause, Bochner, & Duchesne, 2003). The concept of teachers' motivation is functional when an individual is thrilled to satisfy some need or desire. The individual will become involved in, or be attracted toward, actions that are perceived as having the possibility to meet this need or desire (Tan, Parsons, Hinson, & Sardo-Brown, 2006).

Campbell and Pritchard (2016) see teachers' motivation as a series of psychological procedures that cause the initiation, direction, intensity, and persistence of actions. Teachers' motivation is not observed directly. Also, teachers' motivation is an inner feeling that makes people act in a particular way to achieve a given goal and purpose. Teachers' motivation cannot be controlled directly (Lauermann & Berger, 2021). They maintain that motivation occurs within an individual's mind and heart and should not be regarded as something that people do to others. They stress that motivation is not the same as satisfaction.

Arbabisarjou et al. (2016) found that there was a significant relationship between teachers' motivation and academic performance among medical students. A longitudinal study by Liu and Hou (2017) has shown that intrinsic motivation considerably promotes academic performance. Other studies have also demonstrated that academic achievement and teacher motivation are significantly related to academic performance. In a college chemistry class, Hayat, Shateri, Amini, and Shokrpour (2020) found that self-efficacy and task value, which were two motivational components, were the best predictors of students' performance. Meanwhile, Rossi., Trevisol, & Daniela dos Santos-Nunes, Naiana Dapieve-Patias, and Jean Von Hohendorff (2020) exhibited that intrinsic motivation and self-efficacy had a strong influence on students' performance. Mohammad (2010) study amongst university students demonstrated positive significant correlations between academic self-concept, teachers' motivation, and academic performance. The study indicated that motivational factors played vital roles in academic

performance. In short, from previous studies, it is evident that students' motivation is imperative in science teaching and learning.

Instructional supervision may be regarded as the process of enhancing the professional growth of the teachers, and the curriculum, and improving the teaching in the classroom through democratic interaction between the teacher and the supervisor, who may be regarded as the principal. The supervisor is expected to perform, amongst others, two functions: curriculum and instructional improvement. Supervision is essential in the school system to effectively accomplish the purpose, goals, and objectives of the educational programmes in question. Therefore, the effectiveness and success of the educational system hinge on effective supervision. The instructional process and supervision can help a lot in improving the academic performance of students. This is because supervision of instruction aims at enhancing teaching and learning through proper guidance and planning, and devising ways of improving teachers professionally and thereby helping them release their creative abilities so that through them the instructional process is improved. Supervision helps teachers become acquainted with sources of assistance in solving their instructional problems. Instructional supervision occupies a unique place in the entire educational system, and it has become expedient to give it prominent attention. In contemporary Nigeria, instructional supervision is regarded as the process of enhancing the professional growth of the teachers, and the curriculum, and improving the techniques of teaching in the classroom through democratic interactions between the teacher and the supervisor (Okendu, 2012). The instructional process and supervision help a lot in improving the academic performance of students. This is because supervision of instruction aims at enhancing teaching and learning through proper guidance and planning, and devising ways of improving teachers professionally and thereby helping them release their creative abilities so that through them the instructional process is improved and well-articulated. (Okendu, 2012).

Supervision enhances teachers' understanding of the instructional process and assists them in the use of professional literature, journals, free and inexpensive teaching materials, audio-visual aids, and instructional equipment (Afianmagbon, 2014). Ukeje (2012) believes that supervision of instruction helps to improve learning. According to him, instruction refers to the interaction between people, materials, ideas, performances, and objects of the contrived curriculum environment. It is the interaction of activities between the teacher and the learner that constitutes part of the school environment. Through interaction, the supervisor gets to know the instructional problems faced by the teachers. Once the teacher has found a problem and talked about it with the supervisor, the supervisor will suggest a way to fix it.

Students' academic achievement has been attributed to several characteristics which include family background, students' attitude to learning, intelligence, family income, and parents' level of education, without necessarily considering school climate. Although literature revealed that the noble aims of Nigeria's secondary education have partially been realized when compared to students' academic achievement in Anambra State where students' results have ranked among the first-ten in WASSCE in

the past five years. Education stakeholders in Anambra State attested that students' success in external examinations to students' hard work, previous schooling, parent's education, family income, and self-motivation as elements that have a significant influence on the student's general academic achievement. When compared to other states of the federation that have not been ranked among the first ten in an external examination, does it mean that they do not possess the same elements as speculated by education stakeholders in Anambra State? To the researcher, school climate factors such as teachers' motivation, and instructional supervision could equally play a role in students' academic achievement since a conducive school climate probably promotes students learning. Hence, school climate remains an important area that should be studied and well-managed to enhance students' academic achievement. The aim of this study, therefore, is to establish the relationship between school climate and students' academic achievement in public secondary schools in Anambra State. In specific, this study was set to determine the relationship between teachers' motivation, instructional supervision as school climate, and students' academic achievement in Anambra State.

The following research questions and hypotheses guided the study: What is the relationship between teachers' motivation as school climate and student's academic achievement in Anambra State? What is the relationship between instructional supervision as school climate and student's academic achievement in Anambra State? What is the relationship between teachers' motivation, instructional supervision as school climate, and student's academic achievement in Anambra State?

The relationship between teachers' motivation as school climate and student's academic achievement in Anambra State is not significant.

The relationship between instructional supervision as school climate and student's academic achievement in Anambra State is not significant.

The relationship between teachers' motivation, instructional supervision as school climate, and students' academic achievement in Anambra State are not significant.

2. Methods

This is a correlational survey of the ex-post-facto research design. The population of the study was 254 principals and a simple sampling technique was used for 127(50%) respondents. A self-developed questionnaire titled School Climate Questionnaire was employed to collect information from respondents. While a checklist was used to obtain information on students' academic achievement. The format of the questionnaire was based on a four-point scale of Strongly Agree (SA), Agree (A), Disagree (D), and Strongly Disagree (SD). The respondents indicated their level of agreement by ticking (✓) on the rating scale. The scale weighed 4, 3, 2, and 1 respectively. But for the checklist was obtained using from West African Senior Secondary Certificate Examination with the score according to their grading. For instance, A1 = 9, B2 = 8, B3 = 7, C4 = 6, C5 = 5, C6 = 4, D7 = 3, E8 = 2 and F9 = 1 respectively. The questionnaire was validated through the face and content validity. It was also subjected to a reliability test using Cronbach-Alpha and a coefficient of .79 was obtained revealing a

high-reliability index. Coefficient of determination, Pearson r , and Regression were used for data analysis.

3. Results

Research Question 1: What is the relationship between teachers' motivation as school climate and student's academic achievement in Anambra State?

Table 1. The Relationship between Teachers' Motivation as School Climate and Students' Academic Achievement

| Variables | Mean | SD | r | r^2 | $r^2\%$ | Remark |
|--------------------------------|------|-----|------|-------|---------|-----------------------|
| Teachers' motivation | 3.01 | .81 | .731 | .534 | 53.4 | Positive relationship |
| Students' academic achievement | 2.72 | .90 | | | | |

The result in Table 1 shows the relationship between teachers' motivation as school climate and students' academic achievement. The result revealed teachers' motivation with a mean score of 3.01, SD = .81, and students' academic achievement with a mean score of 2.72, SD = .09. The relationship between the two variables was $r = .731$ which shows a positive relationship. r^2 of .534 shows that teachers' motivation was related to student's academic achievement by 53.4%.

Research Question 2: What is the relationship between instructional supervision as school climate and students' academic achievement in Anambra State?

Table 2. The Relationship between Instructional Supervision as School Climate and Students' Academic Achievement

| Variables | Mean | SD | r | r^2 | $r^2\%$ | Remark |
|--------------------------------|------|-----|------|-------|---------|-----------------------|
| Instructional supervision | 2.73 | .82 | .801 | .641 | 64.1 | Positive relationship |
| Students' academic achievement | 2.72 | .90 | | | | |

The result in Table 2 shows the relationship between instructional supervision as school climate and students' academic achievement. The result revealed instructional supervision with a mean score of 2.73, SD = .82, and student's academic achievement with a mean score of 2.72, SD = .09. The relationship between the two variables was $r = .801$ which shows a positive relationship. r^2 of .641 shows that instructional supervision was related to student's academic achievement by 64.1%.

Research Question 3: What is the relationship between teachers' motivation, instructional supervision and school climate, and students' academic achievement in Anambra State?

Table 3. The Relationship between Teachers' Motivation, Instructional Supervision as School Climate, and Student's Academic Achievement

| Variables | Mean | SD | r | r ² | r ² % | Remark |
|--------------------------------|------|-----|------|----------------|------------------|-----------------------|
| Teachers' motivation | 3.01 | .81 | .766 | .587 | 58.7 | Positive relationship |
| Instructional supervision | 2.73 | .82 | | | | |
| Students' academic achievement | 2.72 | .90 | | | | |

The result in Table 3 shows the relationship between teachers' motivation, instructional supervision as school climate, and students' academic achievement. The result revealed teachers' motivation with a mean score of 3.01, SD=.81, instructional supervision with a mean score of 2.73, SD=.82 and students' academic achievement with a mean score of 2.72, SD=.09. The relationship between the three variables was $r = .766$ which shows a positive relationship. r^2 of .587 shows that teachers' motivation and instructional supervision were related to student's academic achievement by 58.7%.

Hypothesis 1: The relationship between teachers' motivation as school climate and student's academic achievement in Anambra State is not significant.

Table 4. Pearson r on Teachers' Motivation as School Climate and Students' Academic Achievement

| | | Teachers' motivation | Students' academic achievement |
|--------------------------------|---------------------|----------------------|--------------------------------|
| Teachers' motivation | Pearson Correlation | 1 | .731* |
| | Sig. (2-tailed) | | .482 |
| | N | 127 | 127 |
| Students' academic achievement | Pearson Correlation | .731* | 1 |
| | Sig. (2-tailed) | .482 | |
| | N | 127 | 127 |

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

Table 4 shows Pearson r on teachers' motivation as school climate and students' academic achievement. The result showed that the relationship between teachers' motivation as school climate and students' academic achievement was a strong positive with $r = .731$ and significance $p = .482$. Therefore, the null hypothesis which states the relationship between teachers' motivation as school climate and student's academic achievement in Anambra State is not significant was rejected. Thus, the relationship between teachers' motivation as school climate and student's academic achievement in Anambra State was significant.

Hypothesis 2: The relationship between instructional supervision as school climate and student's

academic achievement in Anambra State is not significant.

Table 5. Pearson r on Instructional Supervision as School Climate and Students' Academic Achievement

| | | Instructional Supervision | Students' academic achievement |
|--------------------------------|---------------------|---------------------------|--------------------------------|
| Instructional Supervision | Pearson Correlation | 1 | .801* |
| | Sig. (2-tailed) | | .163 |
| | N | 127 | 127 |
| Students' academic achievement | Pearson Correlation | .801* | 1 |
| | Sig. (2-tailed) | .163 | |
| | N | 127 | 127 |

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

Table 5 shows Pearson r on instructional supervision as school climate and students' academic achievement. The result showed that the relationship between instructional supervision as school climate and students' academic achievement was a strong positive with $r=.801$ and significance $p=.163$. Therefore, the null hypothesis which states the relationship between instructional supervision as school climate and student's academic achievement in Anambra State is not significant was rejected. Thus, the relationship between instructional supervision as school climate and student's academic achievement in Anambra State was significant.

Hypothesis 3: The relationship between teachers' motivation, instructional supervision and school climate, and student's academic achievement in Anambra State is not significant.

Table 6. Regression on Teachers' Motivation, Instructional Supervision as School Climate, and Student's Academic Achievement

| Source | Sum of Squares | Df | Mean Square | F-Cal. | F-Crit. | Decision |
|------------|----------------|-----|-------------|--------|---------|-------------|
| Regression | 6.980 | 2 | 3.490 | .577 | .562 | Significant |
| Residual | 9076.627 | 124 | 6.047 | | | |
| Total | 9083.606 | 126 | | | | |

Table 6 shows the regression analysis on teachers' motivation, instructional supervision as school climate, and students' academic achievement. The regression data for the study produced an $F(2,124) = .577$, $F\text{-crit.} = .562$. With $F(2,124) = .577$, $F\text{-crit.} = .562$, the relationship between teachers' motivation, instructional supervision as school climate, and students' academic achievement was significant. Thus,

the relationship between teachers' motivation, instructional supervision as school climate, and students' academic achievement in Anambra State was significant.

4. Discussion

The findings of research question one and hypothesis one showed that the relationship between teachers' motivation as school climate and students' academic achievement in Anambra State was significant. The reason for this finding was that in the teaching and learning process, the motivation of both teachers and learners may direct behaviour toward particular goals, stimulate effort and energy, improve cognitive processing, encourage imitation and persistence, determine whether penalties are reinforcing, and improve performance. Motivation refers to the reasons behind behaviour that is motivated by want and volition and involves a variety of psychological components that originate and maintain behaviours toward the achievement of personal goals. Regardless matter how tough or uninteresting the tasks seem to be, a highly driven educator always completes them. This finding agrees with Bal-Taştan et al. (2018) who reported a significant impact of teacher self-efficacy and motivation on academic achievement in science education students. Oguejiofor, Anyakora, and Obiakor (2021) findings showed a prompt payment of teachers' salaries and adequate remuneration and professional development of students makes teachers have a strong desire to promote the academic performance of students in secondary schools in the Enugu and Agbani education zones. Imasuen and Igharo (2020) found a significant relationship existed between the academic performance of students and teachers' level of motivation in the Oredo Local Government area of Edo state.

The findings of research question two and hypothesis two showed that the relationship between instructional supervision as school climate and students' academic achievement in Anambra State was significant. The reason for this finding is that the main goal of the school administrator's instructional supervision procedures is to raise student success and school quality by assisting teachers in fulfilling their job responsibilities to the best of their abilities. Realizing the school's defined goals depends on the head of the school exercising effective instructional oversight. These heads carry out instructional oversight using a variety of strategies, including direct teacher monitoring. When referring to instructional supervision, the term "direct supervision" refers to all the steps taken by the school administrator to promote one-on-one feedback with instructors to improve teaching and professional competence. This finding is in agreement with Ayandoja, Aina, and Femi (2017) who revealed that there is a significant relationship between academic supervision and students' academic performance. Usman (2015) study showed that regular instructional supervision using robust supervision strategies like checking of students' notebooks, classroom visitation/inspection by school administrators, checking teachers' lesson plans/notes, and inspection of teachers' record keeping have significant correlation with teachers' performance and academic achievement of students in Secondary Schools. Ivagher et al. (2012) findings indicated that classroom visitation and classroom observation have a significant influence on students' academic performance in secondary schools in Makurdi Education

Zone of Benue State, Nigeria.

The findings of research question three and hypothesis three showed that the relationship between teachers' motivation, instructional supervision and school climate, and students' academic achievement in Anambra State was significant. The reason for this finding is that a healthy school climate encourages a positive attitude and openness, which will subsequently create a learning environment that motivates and encourages effective teaching and learning activities, increases teachers' job satisfaction, and, ultimately, improves students' academic performance. This has long been recognized and acknowledged by administrators of the organization, practitioners, psychologists, motivators, and educators. This finding concurs with Pobbi, Kor, and Opare (2018) who found that school climate had a positive and significant effect on the academic performances of students. It was also found that specific school climate factors influence student performance in ensuring a positive school climate. Fakunle and Modupe (2018) findings revealed that there was a significant difference between students' academic performances in schools having an open climate and the academic performance of students in schools having a controlled climate. Greenway (2017) findings indicated that there is a statistically significant, positive relationship between school climate and student achievement in middle schools in this region. In conclusion, teachers' motivation is significantly related to students' academic achievement since the amount of effort put into teaching is a reflection of the teacher's motivation level and is influenced by several environmental factors. Also, instructional supervision is significantly related to students' academic achievement since the effectiveness of instructors' instructional activities is increased and their professional competence is enhanced via instructional monitoring. In general, school climate is essential for students' academic excellence. It is thus, recommended that since educational supervision enhances instructors' professional competence and the effectiveness of their instructional activities school principals should ensure that the climate of the school enhances teachers' jobs. Government, administrators, and instructors in the Anambra state should encourage students to work harder in the classroom by expressing words of encouragement, awarding prizes, and encouraging them to study more academically. This will assist enhance students' academic success. Principals are responsible for ensuring that instructors adhere to the curriculum, and teachers should be educated on the most effective methods of instruction.

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